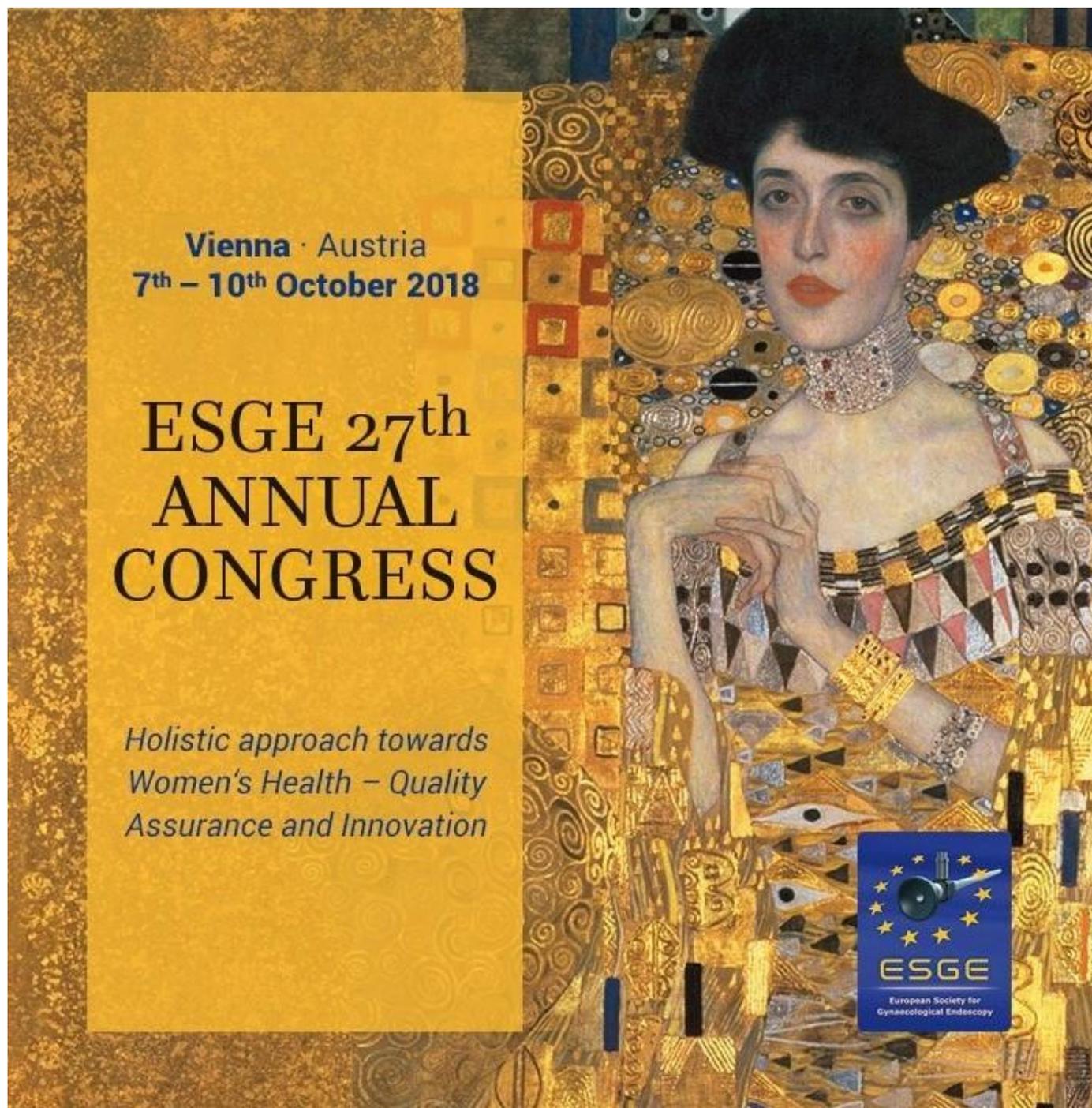


Abstracts of the 27th Annual Congress of the European Society for Gynaecological Endoscopy (ESGE)

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BEST SELECTED ABSTRACTS FOR ORAL PRESENTATION (40)

ES27-0084 -

Best Selected Abstracts 1

A retrospective study of early-life factors and the incidence of endometriosis

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Background

The pathogenesis of endometriosis is not well understood and the prior epidemiologic studies showed some early-life factors were in relation to endometriosis risk, while most of the studies had relative small sample size and the conclusions were inconsistent. The purpose of the present study was to explore the association between early-life factors and the incidence of endometriosis with a larger case-control study.

Methods

This case-control study included 440 patients with surgically confirmed endometriosis and 880 women without endometriosis (controls). Information on early-life factors was ascertained retrospectively by in-person interview, with information gathered from the participant's mother. Adjusted odds ratios (aORs) and 95% confidence intervals (CIs) for the associations between maternal and paternal characteristics, intrauterine and infant exposures and endometriosis were estimated using unconditional logistic regression, adjusting for frequency matching and confounding variables.

Results

We observed that women who were not fed breast milk as infants had twice the risk of endometriosis compared with unexposed women (aOR 2.0, 95% CI 1.6–4.5). Our data also suggested increased endometriosis risk with neonatal vaginal bleeding (aOR 1.9, 95% CI 1.2–4.3), paternal smoker (aOR 1.8, 95% CI 1.1–4.9), caesarean section (aOR 1.7, 95% CI 1.0–3.5), and premature (aOR 1.4, 95% CI 0.8–3.7).

Conclusions

Our results support the hypothesis that some early-life factors may increase the risk of endometriosis in adulthood.

Prevalence, risk factors and surgical outcomes of lateral parametrial endometriosis

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Background

Deep infiltrating endometriosis (DIE) is defined as the presence of ectopic endometrial tissue infiltration under the peritoneum, pelvic structure and organ walls, including lateral parametrium. Despite the enormous impact of lateral parametrial endometriosis (LPE), only a few studies have evaluated its diagnosis, prevalence and clinical features. Our aim is to estimate the intraoperative prevalence of LPE in patients affected by deep infiltrating endometriosis (DIE) and to analyse clinical and surgical data associated with LPE.

Methods

A retrospective cohort study was conducted in our endometriosis academic centre. We included 1360 consecutive women submitted to surgery for DIE in our centre between 2007 and 2017. Patients were divided into two groups according to the presence or absence of intraoperative evidence of LPE. All surgical procedures were performed by skilled surgeons with extensive background in laparoscopy.

Results

Parametrial infiltration was diagnosed preoperatively by clinical and/or instrumental evaluations in 159 women, so it was discovered accidentally in 31.2% of cases. The intraoperative prevalence of LPE was 17% (231 patients on 1360). Preoperatively, LPE patients complained of having a more severe intensity of dysmenorrhea ($p < 0.001$), more frequent voiding symptoms ($p < 0.001$), more frequent hydronephrosis ($p < 0.001$) and more constipation ($p = 0.02$). At surgery, significant correlations were found with rectovaginal septum, vaginal, rectal and ureteral involvements ($p < 0.001$). LPE patients intraoperatively presented a concomitant posterior nodule with a larger transverse diameter (3.6 ± 1.4 cm versus 2.1 ± 1.6 cm $p < 0.001$). In our study, LPE was associated with an aggressive and widespread disease, with a high rate of partial colpotomy and radical ureteral surgery, often requiring a dedicated multispecialty surgical team. The operation time and hospital stay were longer for patients with LPE ($p < 0.001$ for both). Perioperative complications were significantly higher in the LPE group (72 (6.4%) in the control group vs 25 (10.8%) in the study group; $p = 0.001$).

Conclusions

In conclusion, LPE is an occult and not so rare condition and reflects a more severe manifestation of the disease, requiring more aggressive surgery. Patients must be evaluated thoroughly and counselled properly during the preoperative examination, taking into account the significant morbidity, particularly regarding perioperative complications.

Superficial dyspareunia and pelvic floor muscle evaluation with transperineal 3D ultrasound in women affected by endometriosis: a prospective study

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Background

At least 2% to 4% of all sexually active women may experience painful intercourses due to endometriosis and dyspareunia affects 32%-70% of women with endometriosis, representing one of the most delicate aspect of the disease. Previous studies demonstrated the correlation between endometriosis, pelvic floor muscle (PFM) dysfunction and dyspareunia, without differentiating deep from superficial dyspareunia. The aim of the study is to investigate the presence of superficial dyspareunia in women with ovarian endometriosis or deep infiltrating endometriosis (DIE) and its correlation with pelvic floor muscle morphometry evaluated at transperineal three-dimensional (3D) ultrasound.

Methods

A prospective study was conducted between March 2015 to March 2018 on symptomatic, sexually active, nulliparous women with clinical and sonographic diagnosis of DIE or ovarian endometriosis. Presence and intensity of superficial dyspareunia were evaluated with the Female Sexual Function Index (FSFI) questionnaire, focusing on the pain domain items. Three-dimensional transperineal ultrasound was performed to assess the levator hiatus area (LHA) for evaluating the PFM morphometry at rest. All volumes were offline analysed by an investigator blinded to the clinical data. The presence of superficial dyspareunia was defined by question 17 of FSFI (score ≥ 1), while deep dyspareunia was defined by question 18 (score ≥ 1). Patients gave informed written consent to participate.

Results

One-hundred sixty women were enrolled in the study: 81 with DIE (DIE group) and 79 with isolated ovarian endometriosis (OVA group). The prevalence of superficial dyspareunia in the entire study group was 67.5%, in most of cases it was concurrent with deep dyspareunia (56.3%). According to the results of FSFI questionnaire, a significant higher prevalence of superficial dyspareunia, isolated or concurrent with deep dyspareunia, was detected in DIE group (75.3%) than OVA group (59.5%). Women in DIE group showed a narrower LHA at 3D transperineal ultrasound, when compared to women in OVA group (10.9 ± 2.4 cm² versus 11.8 ± 2.4 cm² $p=0.019$). In particular, LHA in patients with superficial dyspareunia was narrower than LHA in patients without superficial dyspareunia (11.0 ± 2.4 cm² versus 12.0 ± 2.4 cm² $p=0.014$). Moreover, in the entire study group a correlation between LHA at rest and scores of FSFI question 17, evaluating pain during vaginal penetration, was found ($p = 0.008$).

Conclusions

Superficial dyspareunia seems to have high prevalence in women affected by endometriosis, showing also a correlation with an increased pelvic floor muscle tone. During the complex evaluation of endometriotic symptoms, clinicians should be aware that increased pelvic floor tenderness may play a crucial role in causing dyspareunia and pelvic pain. Three-dimensional transperineal ultrasound may represent a reliable technique to early detect the correlation between superficial dyspareunia and PFM alterations, in order to achieve a personalized therapy.

Pelvic floor dysfunctions and voiding alterations in women with posterior deep endometriosis: a prospective study with 3D/4D transperineal ultrasound

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Background

Posterior deep infiltrating endometriosis is associated with urinary alterations, in particular with voiding dysfunction (VD) and pelvic floor alterations. The aim of this study is to evaluate the correlation between presence of VD and pelvic floor muscle (PFM) sonographic parameters at transperineal 3D/4D ultrasound.

Methods

A pilot prospective study was conducted between January 2016 and March 2018 on women with clinical and sonographic diagnosis of DIE, scheduled for laparoscopic surgery. Study population was divided in two groups according to the presence or absence of VD on Bristol Female Lower Urinary Tract Symptoms (BFLUTS). Transperineal three-dimensional (3D) and four-dimensional (4D) ultrasound was performed to compare pelvic floor muscles morphometric parameters and rate of levator ani muscle coactivation between the two groups. Levator ani muscle coactivation is diagnosed at 3D/4D transperineal ultrasound as smaller antero-posterior diameter during Valsalva maneuver than at rest. All volumes were offline analyzed by an investigator blinded to the clinical data.

Results

Twenty-six (40.6%) women presented VD, while thirty-eight (59.4%) women did not report any voiding complaints. At BFLUTS questionnaire, the most frequent VD symptoms detected in our study was 'slow or intermittent stream' in 21/26 (80.8%), while 'hesitancy' and 'straining or sensation of incomplete emptying' were reported in 20/26 (76.9%). Endometriosis was confirmed in all patients by histological examination. Baseline characteristics did not significantly differ between the two groups, both for demographic data and disease localizations. We did not find any significant statistical differences in PFM evaluation between the two groups, suggesting similar muscle tone at rest, strength and relaxation during dynamic maneuvers. Women with VD have a higher rate of levator ani muscle coactivation compared to women without VD (61.5% versus 34.2%, respectively; $p=0.03$).

Conclusions

Disturbances of voiding phase have multiple causal factors, including pelvic floor muscle dysfunctions. Levator ani muscle coactivation seems to have a role in the pathophysiology of VD in women with posterior DIE. In these women, transperineal 3D/4D ultrasound may be an objective and reproducible diagnostic tool for the assessment of PFM alterations as a potential cause for VD.

Preoperative diagnosis of silent ureteral involvement in deep endometriosis by transvaginal ultrasound examination

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Background

Ureteral endometriosis is usually diagnosed during gynecological surgery for deep pelvic endometriosis. An optimal surgical management requires that the diagnosis of ureteral endometriosis should be made preoperatively and not fortuitously during surgery. The purpose of this study is to evaluate the accuracy of transvaginal sonography for preoperative detection of ureteral dilatation in patients with deep endometriosis in order to identify a potential silent ureteral involvement by the disease.

Methods

This was a prospective study of 200 consecutive patients undergoing surgery for deep endometriosis, evaluated between January 2012 and December 2014 at a tertiary endometriosis center at the Department of Obstetrics and Gynecology, Fondazione Policlinico Universitario A. Gemelli, Rome, Italy. Routine transvaginal ultrasound, abdominal ultrasound, recording of patient history, signs and symptoms, and gynecologic examination were performed. The ureter was identified as a fusiform, fluid-filled anechoic tubular structure, displaying intermittent peristalsis, tapered gradually and was continuous with urinary bladder. On Doppler scanning, no blood flow was detectable. The ureters were identified in either the transverse or oblique sagittal plane, and imaging was performed proximally along as much of their lengths as possible. Visualization was carried out for sufficient time to allow ureteral distention secondary to peristalsis, with ureteral diameter being measured coincidentally. The main outcome of interest was presence of ureteral dilatation or hydronephrosis.

Results

13 patients (6.5%) out of the 200 patients with deep endometriosis had associated ureteral dilatation diagnosed at transvaginal ultrasound. Renal ultrasound detected 6 hydronephrosis out of 13 (46%) patients with ureteral dilatation. Surgical and histological finding were retrospectively compared with the ultrasonographic preoperative diagnosis. An ureteric involvement becomes more likely the bigger the endometriotic nodule of DIE is, with a cut-off value of 20 mm.

Conclusions

Our study confirms a relatively high incidence of ureteral involvement in patients with deep endometriosis. Transvaginal ultrasound appears to be a reliable tool for the diagnosis of ureteral involvement; furthermore, it allows to detect both the level and the degree of obstruction. In conclusion, our findings suggest that TVU examination is an accurate diagnostic non-invasive tool for the detection of ureteral involvement by endometriosis.

Enhanced expression of TACE contributes to elevated levels of sVCAM-1 in endometriosis and is associated with infertility

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Background

We and others have shown that serum soluble (s) vascular cell adhesion molecule-1 (sVCAM-1) levels are significantly higher in women with endometriosis, compared to disease free controls. Experimental evidences exist suggesting the role of sVCAM-1 and soluble intracellular adhesion molecule-1 (sICAM-1) in pathogenesis of endometriosis. Tumor necrosis factor-alpha- converting enzyme (TACE) was identified as the protease responsible for phorbol 12-myristate 13-acetate (PMA) induced VCAM-1 release in murine endothelial cells. Thus, we further asked whether increased sVCAM-1 and sICAM-1 levels are associated with TACE activity in endometriosis.

Methods

Expression of *TACE* mRNA was analyzed by qRT-PCR in 111 endometrium tissue samples and 37 healthy peritoneum samples. Immunohistochemistry was performed in 123 tissue samples and the relation between tissue TACE protein levels and sVCAM-1 secretion was examined. PMA induced sVCAM-1 release, and TACE-, VCAM-1-, and ICAM-1- transcripts or proteins were measured in an immortalized endometriotic epithelial cell line (11Z) pre-incubated either with TACE inhibitors or following *TACE* siRNA knockdown.

Results

Here we demonstrate that TACE protein is overexpressed in epithelium of tissue samples of both eutopic endometrium and ectopic lesions of women with endometriosis compared to disease free controls ($p < 0.001$ both) and that the overexpression of the protein in the lesions is due to activation of *TACE* gene transcription ($p < 0.001$). Moreover, epithelial TACE protein was significantly higher in ectopic samples than in corresponding eutopic tissue of women with the disease ($p < 0.001$). High endometrial tissue TACE protein expression correlated with higher serum sVCAM-1 levels ($p < 0.05$), but not with sICAM-1 levels. Inhibition of TACE either by TACE inhibitors or by *TACE* siRNA knockdown resulted in decreased shedding of PMA-induced sVCAM-1 *in vitro* ($p < 0.005$ or $p < 0.01$, respectively) but the TACE inhibitors did not affect transcription of *TACE* or *VCAM-1*. Additionally, we observed an upregulation of TACE in the endometrial epithelium of the proliferative phase in infertile women ($p < 0.005$) and in infertile women with endometriosis ($p = 0.05$).

Conclusions

Here we provide the first functional evidence that induced TACE activity in human endometriotic epithelial cells is at least in part responsible for the enhanced release of sVCAM-1 from these cells. The regulation of aberrant TACE substrate shedding represents a promising yet relatively unexplored area of endometriosis progression and could serve as a basis for the development of new alternative treatment of the disease.

Reproducibility of the Endometriosis Fertility Index (EFI).

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Background

The Endometriosis Fertility Index (EFI) is a validated scoring system that predicts pregnancy rates without using assisted reproduction technology treatment in postoperative endometriosis patients who suffer from subfertility, and takes into account all endometriosis rASRM stages.

The aim of this study was to evaluate whether the EFI score can be reproduced reliably by two experts; additionally, reproducibility by expert versus junior and within one expert (intra-rater) of the EFI and the rASRM score were also studied.

Methods

A single cohort prospective observational (non-interventional) study in patients scheduled for endometriosis surgery of any rASRM stage at the Leuven University Fertility Center, including data of 82 patients that were scored by three different raters (expert 1 (C.T.), expert 2 (C.M.), junior (C.B.)).

All patients underwent complete CO₂-laser-laparoscopic excision of any rASRM-stage endometriosis in a tertiary referral center; their data were transferred into a specifically designed coded clinical research file (CRF).

Three different comparison levels were decided when designing the study protocol: expert-1 versus expert-2 (inter-expert), junior versus expert-1, and intra expert-1. All raters scored both the EFI and the rASRM stage/score based on all the information in the CRF, separately and independently from each other.

Results

The primary outcome studied was the percentage of clinical agreement of the EFI-score in the 'inter-expert' comparison. Clinical agreement was defined as having no impact on the subsequent clinical decision pathway regarding fertility management as currently used in our clinic, meaning that EFI-scores should be within the same range (low EFI range: 0-4, middle EFI range: 5-6, high EFI range: 7-10).

For the primary outcome, the study hypothesis was confirmed, namely that the rate of clinical agreement between the two experts was higher than 95%, which was near-to-perfect (100% (95% CI 95.6%-100%), one-sided p-value=0.0149).

Secondary outcomes also showed high agreement rates, even for a trainee: inter-expert numerical agreement was 98.8% (95% CI 93.4%-100%), junior-expert numerical agreement was 98.8% (95% CI 93.4%-100%) and intra-expert numerical agreement was 100% (95% CI 95.6%-100%).

Disagreements between raters could be explained by differential rating of both the least function score and/or the rASRM score. Of note, the reproducibility of the rASRM score was clearly inferior to that of the EFI for all three comparisons, for example as shown by a Bland-Altman plot with a wide span (40points) of the 95% limits of agreement.

Conclusions

The high reproducibility of the EFI— next to its already known superiority over the rASRM system in predicting postoperative pregnancy rates - further supports the use of the EFI in daily clinical practice as the principal clinical tool for postoperative fertility management and counseling of women with endometriosis.

ENDOSEARCH A European and North American International Clinical Trial testing a cluster of biomarkers for the diagnosis and prognosis of endometriosis

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Background

"Laparoscopy is the gold standard to diagnose endometriosis with a specificity of 0.8. But it is a surgical procedure with potential risks, including both vascular and intestinal injuries. Combinations of various biomarker-based tests and imaging techniques have been evaluated for their ability to detect endometriosis. Despite these efforts, none of them has been successful for a routine clinical practice implementation." "Several research teams have studied the role of circulating genetic material in the development of the disease, described as intervening in cellular functions, related to endometriosis (embryology, cell cycle, intracellular signaling) or differentially expressed targets in eutopic vs ectopic endometrium. The aim of our study is to test a combination of biological markers differentially expressed in samples from women with or without endometriosis..

Methods

"ENDOSEARCH is a prospective multicentric international clinical trial including 19 renowned specialized centers in Europe, USA, Canada, and the Indian Ocean, granted by the European Union (H2020) aiming to validate a cluster of biomarkers by recruiting 1000 patients, ethical committees having approved the study." "The Patient Group includes women of reproductive age between 18 and 45 with suspected endometriosis undergoing laparoscopy. Patients with predominant adenomyosis and/or fibroids diagnosed by imaging, chronic, malignant, infectious, metabolic or endocrine diseases are excluded." "The Control Group includes patients of reproductive age between 18 and 45 without any endometriosis-related clinical sign, with planned laparoscopic surgery for other indications." "Samples of endometriosis lesions for the Patient Group, endometrial biopsy and blood samples for both groups are sent with a tool kit to a unique center (Endodiag, Paris, France) to be tested with the cluster of biomarkers.

Results

20 centers in 8 countries have agreed to participate to this international clinical trial testing a cluster of biomarkers to diagnose endometriosis by endometrial sampling. For the first time a clinical trial on endometriosis has received a grant from the European Union under the program H2020 This study has been registered with clinical trials.gov

The first steps and process of recruitment of the centers are presented. The cluster of biomarkers chosen has already shown promising results to diagnose endometriosis with PPV and NPV of over 85%.

Conclusions

"We present the first large prospective multicentric international clinical trial aiming to test a cluster of biomarkers in endometriosis lesions, eutopic endometrium and circulating blood, by recruiting over 1000 patients all around Europe, the US and Canada. "ENDOSEARCH is the first step of a set of ongoing clinical trials to set up a tool kit for the diagnosis and prognosis of endometriosis, with promising results to develop new molecular strategies of treatment.

Clinical outcome of colorectal endometriosis surgeries over a 10-year period in the tertiary endometriosis centre of the University of Giessen and Marburg

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Background

Bowel endometriosis is one of the most severe clinical presentation of deep infiltrating endometriosis. Surgery remains the gold standard of treatment having 3 major surgical approaches, which can be applied; the “radical removal” of the affected bowel segment with end-to-end anastomosis, the disc resection of the anterior bowel wall and the shaving procedure. It is currently not clear which technique is superior to the other regarding clinical outcome. In our endometriosis centre we performed all kind of surgeries and report about our experience.

Methods

We conducted a retrospective cohort analysis of bowel endometriosis surgeries between 2005-2015. A questionnaire has been sent to the patients about clinical symptoms, reproductive history and recurrence. The patients were asked to evaluate their symptoms before and 1 year after the surgery and at the time of the evaluation. The clinical records have been analysed to gain information about intra- and postoperative data, complications and histological results.

Results

Between 2005 and 2015 120 patients underwent colorectal endometriosis surgery. 75 (62,5%) patients were treated with segmental resection, 19 (15,8%) with discoid resection and 26 (24,7%) with shaving. Bowel endometriosis was confirmed in 99,2% (119/120) cases. No major intraoperative complication occurred in the shaving and discoid resection groups, whereas 2,7% (2/75) suffered a major complication in the segmental resection group, having both an injury of the left ureter. Bowel surgery associated major postoperative complication occurred in 1 case in the shaving group with bowel perforation, in none of the patients in the discoid resection group and in 4 cases (5,3%) of the segmental resection group involving insufficiency of the anastomosis. Dysmenorrhoea, dyspareunia, chronic pelvic pain, bowel dysfunction and dyschesia showed an improvement after all type of surgery. Dysuria and bladder dysfunction showed a worsening 1 year after the procedure and improved just on a long-time manner. Histological recurrence of endometriosis occurred in 12,5%, 10% and 10% in the shaving, discoid resection and segmental resection groups respectively, with having only 1 case of recurrence of bowel endometriosis in both the shaving and discoid resection groups. None of the patients developed a recurrence of bowel endometriosis in the segmental resection group. 54,1% of the patients were seeking for a pregnancy, having a cumulative pregnancy and delivery rates of 68% and 48% at 4 years after surgery. Two major obstetrical complication occurred during the labour with one patient having a rupture of the posterior uterine wall and the other one a rupture of the posterior vaginal vault.

Conclusions

Our experience showed a great improvement of clinical symptoms after all type of bowel surgery, a high pregnancy and a low recurrence rate. The bowel surgery associated complications were the most frequent in the segmental resection group.

Oral administration of norethisterone acetate in women with adenomyosis: effects on ultrasound features and clinical symptoms

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Background

The purpose of this study was to evaluate the effects of medical treatment with norethisterone acetate (NETA) administered orally on ultrasound features of adenomyosis, pain symptoms and abnormal uterine bleeding.

Methods

Forty women in fertile age with an ultrasound diagnosis of adenomyosis were enrolled. The ultrasonographical signs of adenomyosis were recorded by 2 and 3-dimensional transvaginal ultrasound and the severity of the disease was defined with a ultrasonographic score system. The score system divides the disease in adenomyoma and in focal or diffuse adenomyosis of the external myometrium and of junctional zone (JZ). A score number from 1 to 4 was assigned to the extension and myometrial involvement of each type of adenomyotic lesion and for JZ alterations. The numerical scores obtained were classified in three groups: mild (ranged 1-7), moderate (ranged 8-13) and severe (ranged 14-20). Clinical evaluation was performed and the pain symptoms like dysmenorrhea and dyspareunia were investigated using the 10-point Visual Analogue Scale. Menstrual bleeding was assessed with the Pictorial Blood Assessment Chart (PBAC). All women underwent the follow-up evaluation 6 months after the beginning of therapy while in a subgroup (n=10) of women after an additional follow up visit was performed 3 months from the discontinuation of medical treatment.

Results

40 patients with adenomyosis (mean age 36.7 ± 6.7 yrs) were classified according to the ultrasonographic scoring system. Before medical therapy administration, the distribution of ultrasonographic score of adenomyosis was as follow: mild adenomyosis in 25% (n=10), moderate adenomyosis in 40% (n=16) and severe adenomyosis in 35% (n=14) of patients. After 6 months of administration of NETA 5 mg daily, a significant decrease of the severe adenomyosis ultrasonographic score was shown, as well as when the entire group of patients was considered. Concerning each ultrasound features of adenomyosis, drug administration significantly reduced uterine volume, size of focal adenomyosis foci and intramiometrial cysts, while hypoechoic linear striations remained unchanged. Regarding clinical symptoms, after 6-months of treatment, the assessment of PBAC score and painful symptoms showed a significant improvement than the inclusion visit. After 3 months of discontinuation of medical treatment, both ultrasonographic assessment of severity of disease and clinical symptoms showed a slight worsening than during drug administration without statistically significant differences.

Conclusions

Medical treatment with NETA showed a significant change of ultrasonographic features of adenomyosis improving the clinical symptoms and the severity of the disease.

12-month procedural outcomes of the SONATA pivotal IDE trial: sonography-guided transcervical radiofrequency ablation of uterine fibroids

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Background

The Sonata System is a transcervical device that integrates intrauterine sonography for imaging with radiofrequency energy for fibroid ablation in a single unified device. The SONATA pivotal IDE trial was designed to establish the safety and effectiveness of the Sonata® System in the treatment of symptomatic uterine fibroids.

Methods

This was a prospective, longitudinal, multicenter, single-arm trial conducted under an FDA Investigational Device Exemption (IDE) at 22 clinical sites in the US and Mexico and involving premenopausal women between the ages of 25 and 50 with heavy menstrual bleeding secondary to fibroids. Transcervical, intrauterine ultrasound-guided radiofrequency ablation with the Sonata System was performed on up to 10 fibroids per subject ranging from 1-5 cm in diameter as determined by transvaginal sonography.

Results

One hundred forty-seven patients and 442 fibroids were treated. Ablated fibroids comprised all nonpedunculated fibroid types: type 1 (3.4%), type 2 (17.4%), type 2-5 (20.6%), type 3 (26.2%), type 4 (22.6%), type 5 (8.8%), and type 6 (0.9%). The mean procedure time was 46.9 ± 29.7 minutes with a median of 40.0 minutes. Mean length of stay (including the procedure time) was 2.7 ± 2.3 hours (median 2.3 hours). On average, patients reported returning to normal daily activities in 2.2 ± 2.2 days with half of the patients returning to normal activity within 1 day of the procedure. Patients reported returning to work at 3.6 ± 2.6 days (N=111), with at least half of the subjects returning to work within 3.0 days following the procedure (median of 3.0 days). Patients resumed a normal diet at 0.8 ± 1.3 days, normal sleep at 0.7 ± 1.6 days, normal urinary and bowel functions at 0.2 ± 0.8 days and 1.4 ± 1.9 days, respectively.

Conclusions

Transcervical radiofrequency ablation with the Sonata System was associated with short procedure times and length of stay, and a rapid return to normal activity and work.

Laparoscopic cystectomy of endometrioma (LC) followed by oral contraceptives (OC) sustains later fertility

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Background

Laparoscopic surgery enhances fertility in patients with endometriosis; however, the effect is known to decline as the post-operative time goes by, and this decline discourages patients with endometriosis who do not wish immediate childbearing from undergoing laparoscopic surgery. Post-operative use of oral contraceptives (OC) reduces recurrence of endometrioma after laparoscopic cystectomy (LC); however, its effect on later fertility is unknown. To examine whether LC followed by OC sustains later fertility, we conducted the following study.

Methods

Under IRB approval, 107 patients who underwent LC, have wished conception, and were followed-up for at least 24 months after LC, were retrospectively analyzed. According to the point of arising a wish for pregnancy, patients were divided into two groups: right after LC without post-operative use of OC (Group A, n = 83), and right after the discontinuation of post-operative use of OC (Group B, n = 24). The cumulative pregnancy rate and the time to pregnancy were compared between groups.

Results

The cumulative pregnancy rate in Group B (54.2%) was equivalent to that in Group A (56.6%). The time to pregnancy in Group B (12.8 ± 7.3 months, mean \pm SEM) was also comparable with that in Group A (11.7 ± 9.3). In addition, the effect was independent of the length of post-operative use of OC.

Conclusions

The pregnancy rate and the time to pregnancy were comparable between two groups, which suggests that the fertility does not decline after LC followed by post-operative use of OC. This finding encourages patients with endometrioma who do not wish immediate childbearing to undergo LC followed by OC.

Laparoscopic ethanol sclerotherapy of ovarian endometrioma: a new minimal invasive procedure. Description of the technique and preliminary results

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Background

The use of ethanol for treatment of endometrioma has been increasingly reported in recent years as an alternative fertility-sparing technique. Until now is described only a transvaginal or transabdominal ultrasound technique with risks associated of infection, internal bleeding, and irritation from the sclerosing agent. The purpose of this preliminary study is to evaluate the efficacy and safety of aspiration and sclerotherapy of endometrioma with 95% ethanol using a laparoscopy approach.

Methods

A retrospective study of 43 women with 53 endometriomas (10 bilateral) measuring 30–12 cm with no suspected malignancy, who underwent laparoscopic aspiration and ethanol sclerosis between September 2014 and September 2017. In a standard operative laparoscopy setting, we aspirated and washed inside the cyst in order to remove all the chocolate liquid. With a specific catheter, ethanol at 95 % was instilled inside the cyst and left in the cyst for 15 minutes and then removed. The volume of ethanol instillation ranged from 80% to 95 % of the initial aspirated cyst volume. Associated superficial or deep endometriotic implants and adhesion, if present, were treated at the same time in the standard way. Patients were followed up by ultrasound at 3,6, 12 months and then every year to identify rates of complication and recurrence. .

Results

Mean patient age was 31 (range 19-40) years, mean cyst diameter 5.8 (range 3-12) cm. Of 43 women, 14(32%) had previous surgery for endometrioma.34 (79%) patients had deep endometriosis associated. No major ethanol-related complications were recorded, as peritoneal irritation or systemic alcohol effect . Maximal reduction of cyst size occurred at approximately 6 months. All 43 patients had ultrasounds every 3 months for a minimum of 1 year. The mean length of follow-up was 25 months (SD 12). Recurrence occurred in 5 of the 53 cases (9%), and these cysts had maximum diameters of 15, 20, 25, 30, and 40 mm.

Conclusions

Our study may be the first report that evaluate ethanol sclerotherapy with a laparoscopic approach. It is a safe and effective treatment for endometriomas , also bilateral or with deep endometriosis associated, while preserving healthy ovarian tissue. We conclude that management of ovarian endometrioma with the use of laparoscopic sclerotherapy appears to be a promising alternative surgery.

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Best Selected Abstracts 2**

Arcuate, subseptate or normal uterus? An observational 3D TVS morphological study on 724 uterine anomalies with small cavity indentations and correlation to reproductive outcomes.

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Background

Uteri with small indentations of the fundal cavity were defined as arcuate or subseptate by the Salim/ASRM classification on 3D TVS coronal section. The new ESHRE/ESGE classification considers these types of uteri as normal (U0) - dysmorphic (U1c) or septate (U2a). All classifications of congenital uterine anomalies present strengths and weakness and all have been criticized for different aspects. With regards to small indentations of the fundus the question is still open on the real reproductive impact of the defect and the need for surgical treatment. The aim of this study was to observe the impact of an indentation of the uterine cavity (arcuate-subseptate uteri) on fertility and to correlate the cavity morphology to reproductive issues.

Methods

We evaluated 724 stored 3D transvaginal volumes obtained from women with small anomalies of the cavity, defined as an internal fundal indentation ranging from 3 to 30 mm. Complete septate uteri were excluded. The assessment of uterine morphology was performed in a coronal plane through 4 measurements: indentation width (W) (the distance between the internal tubal ostia), septal length (L) (the distance from the tip of the fundal indentation to the interostial line), uterine wall thickness (M) (the distance from interostial line and the external uterine serosa) and fundal indentation angle (α) (the angle between the two endometrial layers). All defects were classified and subclassified according to 4 different classifications (Salim; ASRM; ESHRE; CUME). The recorded reproductive history of the patients was correlated to the measurements and to the subclassified uterine anomalies.

Results

Of the 724 patients included in this study 489 (67.5%) tried to conceive before the 3D evaluation: 37,4 % (183/489) were not able to conceive, 25,3% (123/489) had at least one miscarriage and 6,1% (30/489) had a preterm delivery. The percentage of women with at least one miscarriage was significantly higher when a L/M ratio greater than 80% and a L/W ratio less than 27% were observed. No significant correlation was found between septal lengths and infertility. The uteri reclassified as subseptate (according to ESHRE) showed higher percentage of infertility and at least one miscarriage.

Conclusions

The defect known as arcuate uterus is no longer a clinical entity according to the ESHRE/ESGE classification. Clinical difficulties may arise when following this recommendation with regards to patient counselling and choice of treatment in women who experience miscarriages and infertility. The new classifications are not supported by retrospective data or prospective studies on the impact of corrective surgery that could help refine selection criteria for metroplasty, resulting in improved long-term outcomes.

Image parameters for diagnosis of endometrial cancer and atypical hyperplasia by transvaginal ultrasound and gel infusion sonography

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Background

Postmenopausal bleeding (PMB) is the cardinal symptom of endometrial cancer (EC) or hyperplasia with atypia (At). However, only 5-10% of women with PMB have malignancy. The diagnostic set-up for women with PMB starts with transvaginal ultrasound (TVS) and all women with endometrial thickness(ET) \geq 4mm need endometrial sampling or/and hysteroscopy. A fast track diagnostic strategy of women with PMB is generally recommended. Rather than including all women with PMB in a fast track strategy, selection of women with high risk of EC/AT for a fast track diagnostic strategy could be more cost-effective.

The objective of this study was to evaluate image and clinical parameters for prediction of endometrial pathology by Transvaginal Sonography(TVS) and Gel Infusion Sonography(GIS) in women with PMB and to propose a simplified score system for identification of women with a high risk of EC or At.

Methods

711 consecutive women with PMB had TVS performed by residencies supervised on request by trained physicians. GIS was added in 395 women. Endometrial pattern was related to endometrial histopathology. Endometrial pattern was evaluated according to the prior elaborated Risk of Endometrial Cancer (REC)-score system by TVS: endometrial thickness(ET), Doppler vessel pattern, interrupted endo-myometrial junction, irregular endometrial surface outline by GIS and correlated to endometrial pathology. Univariate and multivariate logistic regression were used to identify the optimal combination of image parameters in women with a high risk for EC/At. Women with ET \geq 8mm were analyzed separately.

Results

The most optimal ultrasound parameters were: interrupted endo-myometrial junction (AUC .90), irregular endometrial surface outline (AUC .80) and Doppler score (AUC .86). Doppler score was obtained by simple addition of the following Doppler parameters: Vessels not defined as dominant single/double vessel (1 point), multiple vessels (1 point) and large vessels (1 point).

Only 20 (7.5%) of 267 women with EC/At had ET < 8mm. In 427 women with ET \geq 8 mm and findings of endometrium with doppler flow-score + interrupted endo-myometrial junction (score value of 2), AUC was .93 . At a score value of \geq 2 the sensitivity was 92% and the specificity was 84%. Adding irregular endometrial surface outline by GIS marginally increased efficiency (AUC: .933). At a score value of \geq 3, sensitivity was 86%, specificity 92%, while 89% were correctly classified.

Conclusions

In women with ET \geq 8mm the proposed scoring of the endometrium had a high efficiency for diagnosis of EC/At and may be used to predict EC/At and select women with high EC risk for a fast track diagnostic strategy.

Surgical, clinical and functional outcomes in patients with recto-sigmoid endometriosis and pre-operative intermediate risk of bowel segmental resection

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Background

There is no shared consensus regarding the choice between radical (segmental resection) or conservative (shaving, discoid excision) approach for recto-sigmoid endometriosis (RSE) surgical management. Our aim was to compare surgical, clinical and functional outcomes between conservative and radical surgery in women affected by RSE with pre-operative intermediate risk of bowel segmental resection.

Methods

We conducted a retrospective study cohort including 392 patients with RSE and pre-operative intermediate risk of bowel segmental resection, submitted to surgery at our academic center between January 2004 and January 2017. We define intermediate risk of bowel resection in patients without repeated previous conservative surgeries for RSE and with a single recto-sigmoid endometriotic nodule with dimension between 2 and 5 centimetres, without critical bowel stenosis (<50%) or circumferential infiltration (<40%), without rectal bleeding, subocclusive symptoms or mucosal infiltration at colonoscopy. The final decision on surgical approach was made at time of surgery according to the depth of bowel involvement at macroscopic evaluation and risk of complications. In all cases an attempt to avoid bowel segmental resection was made. Preoperative characteristics, surgical data, short- and long-term complications, rate of proven and suspicious recurrence and pain symptoms severity were assessed.

Results

During study period, according to risk stratification for RSE, 41% of patients with intermediate risk were found and included in the study group. Patients were divided into three groups according to the adopted surgical technique: shaving (297/392, 75.8%), discoid excision (33/392, 8.4%) and segmental resection (62/392, 15.8%). Median follow-up time was 43 months (range 12-163). In segmental resection group, women showed more overall short-term complications in comparison to the discoid group and shaving group (17.7% vs 9.1% vs 5.4%, respectively; $p=0.004$). Suspicious and proven RSE recurrence rate showed no statistically significant difference among the three groups. The three techniques equally improved pain severity of symptoms in all the groups. There were no statistically significant differences in the three groups concerning the rate of de novo chronic constipation and urinary retention.

Conclusions

According to our data, conservative surgery should be preferred to radical surgery in patients with recto-sigmoid endometriosis and pre-operative intermediate risk of bowel segmental resection because of the similar results in term of symptoms severity improvement and recurrence rate, but with less short-term complications.

Transvaginal laparoscopy in the detection and treatment of minimal endometriosis

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Background

Although indirect methods for the exploration of the tubo-ovarian tractus are commonly used as a first line screening method, direct visualization by endoscopy of the uterine cavity and tubo-ovarian structures still is considered to be the golden standard. Transvaginal endoscopy is a minimally invasive technique for the evaluation of the tubo-ovarian structures in their natural position and environment. With the use of pre-warmed Ringer lactate and hydrofloatation superficial small lesions, both on the peritoneal surface as inside the endometriotic cyst, can easily be identified.

Methods

1502 patients attending the infertility clinic were referred for a transvaginal endoscopic exploration. TVU was performed preoperatively in all patients. Patients with obvious pelvic pathology were excluded. In all patients TVE was performed as described by Gordts et al. (1998).

Results

Of the 1502 patients the TVE technique used to access the pouch of Douglas failed in 27 patients (1,8%). Overall the complication rate was 1,7%, whereas the incidence of bowel perforation at the time of insertion of the instruments was 0,7%. Endometriosis was diagnosed in 267 patients (18%). Peritoneal implants were detected in 164 patients (61% of the endometriosis group). Ovarian endometriotic cysts were detected at TVE in 76 patients (28% of the endometriosis group). These cysts were mostly associated with adhesions. Adhesions without cyst formation but due to endometriosis were found in 27 patients (10% of the endometriosis group). Ovarian endometriomas were only detected preoperatively by TVU in 16 patients (24% of the group with endometriotic cysts detected at TVE). The mean size of endometriomas that were missed at TVU was 9,7 mm (SD 4,9).

Eleven patients with endometriosis were referred to standard laparoscopic treatment, all the other patients could be and were treated by TVE during the same session. Endometriotic implants were coagulated using bipolar coagulation. Vascularized adhesions were first coagulated and then resected. In patients with an endometriotic cyst inside an ovary, first a sharp and/or bipolar dissection at the site of invagination allowed us to open the cyst, then drain the chocolate content and eventually coagulate all the endometriotic implants inside the opened cyst under direct vision with a bipolar probe. In 124 patients treated in this way and without tubal pathology or an abnormal sperm count of the partner, expectant management revealed a 49% pregnancy rate at 6 months postop, the mean age of this group being 31.

Conclusions

Direct endoscopic visualization and the use of a watery distension medium can reveal the presence of subtle lesions that otherwise remain undetected. There is increasing evidence that the diagnosis of endometriosis, whatever its stage, is important in patients with infertility. TVE access allows treating these small lesions on an outpatient basis, i.e. without the need of standard laparoscopy.

Diagnostic accuracy of Saline Infusion Sonography to detect endometrial polyps in postmenopausal women: A Systematic Review and Meta-Analysis

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Background

Introduction:

Postmenopausal bleeding is a common complaint and can relate to several benign and malign conditions. A frequent finding in women with postmenopausal bleeding are endometrial polyps. The risk of a focal (pre) malignancy in a polyp in postmenopausal women lies around 6%. Because of this reported risk, it is most important to detect polyps in postmenopausal women, preferably in a minimally invasive way. Therefore we are interested in the diagnostic accuracy of the Saline Infusion Sonography (SIS) to detect polyps in women with postmenopausal bleeding specifically. In view of a lack of studies on postmenopausal women, we decided to perform a systematic review and a meta-analysis to study the diagnostic accuracy of SIS in postmenopausal women to detect endometrial polyps.

Methods

Methods: In November 2017 we performed an electronic search in the MEDLINE and EMBASE databases to identify all diagnostic studies in which SIS was used to diagnose endometrial polyps in women with postmenopausal bleeding. We included all studies in which data of SIS performed in postmenopausal women to detect endometrial polyps could be extracted, and diagnosis of an endometrial polyp by hysteroscopy (or pathology after hysteroscopy) were used as a reference standard. The methodological quality was assessed by two reviewers using the QUADAS-2 tool. We decided to analyse the results separately for both reference tests. We calculated the pooled sensitivity and specificity using the HSROC model.

Results

Results: After selection and quality assessment five studies could be included. For the reference test polyps yes/no using pathology we found a pooled sensitivity of 86.51% [18.89-100] and a pooled specificity of 91.11% [8.57-100]. For the reference test polyps yes/no on hysteroscopy we found a pooled sensitivity of 85.4% [60.98-100] and a pooled specificity of 83.60% [53.62-100]. The reported sensitivity of the hysteroscopy to detect polyps in two studies were reported 81-98%

Conclusions

Conclusion: Provided that the SIS has an optimal quality, we can conclude that the SIS is an accurate method to stratify women with postmenopausal bleeding for further investigation with hysteroscopy and for reassuring with expectant management after a benign endometrial sample.

Preservation of myometrial integrity 12 months after transcervical radiofrequency ablation with the Sonata® System: results from the FAST-EU clinical trial

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Background

The Sonata® System is a transcervical device to ablate uterine fibroids with radiofrequency (RF) energy, guided by intrauterine sonography provided by an ultrasound probe integrated within the system. This study evaluated myometrial integrity 12 months after transcervical radiofrequency (RF) ablation of uterine fibroids with the Sonata System. Current evidence in the literature suggests that a uterine wall thickness <2.3-2.5 mm is associated with an increased risk of uterine rupture.

Methods

The FAST-EU Clinical Trial was a prospective, longitudinal, multicenter, single-arm trial involving women with heavy menstrual bleeding secondary to fibroids who were treated at seven academic and community hospitals in the United Kingdom, the Netherlands and Mexico with transcervical, intrauterine ultrasound-guided radiofrequency ablation (the Sonata System). Transcervical RF ablation was performed on up to 5 fibroids per subject ranging from 1-5 cm in diameter as determined by magnetic resonance (MR) imaging. All measurements and comparisons, including myometrial thicknesses were derived from baseline and 12-month MR scans by an independent core MR imaging center. Scans were analyzed to assess the preservation of myometrial integrity and reviewed for uterine wall anomalies after RF ablation with the Sonata System. In particular, any uterine wall thicknesses <2.5 mm would be considered evidence of uterine wall compromise.

Results

Twenty-nine patients underwent baseline and 12-month MR scans with contrast enhancement. Minimum myometrial thicknesses in all visible slices were > 2.5 mm in diameter. There were no areas seen on MR imaging that indicated any loss of myometrial integrity compared with baseline imaging. In addition, no anomalies (such as uterine wall scarring) were detected through direct measurement and analysis of the MR scans post-treatment.

Conclusions

Transcervical radiofrequency ablation with the Sonata® System was associated with preservation of myometrial integrity with no uterine wall anomalies detected post ablation.

Laparoscopic total pelvic exenteration for recurrent gynaecologic cancer: surgical technique and outcome

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Background

Our purpose is to describe the laparoscopic surgical technique, show the feasibility of optimal laparoscopic debulking for selected patients and evaluate survival and morbidity after total pelvic exenteration (PE) with nerve sparing, for the management of progression or local recurrent gynecologic cancer. The role of laparoscopy in gynaecologic oncology is increasing continuously. Surgery for cervical or endometrial carcinoma is regularly done by laparoscopy, in advanced cases it is used for surgical staging. PE is the most extensive gynaecologic operation with considerable perioperative morbidity

Methods

We retrospectively evaluated 11 patients with gynecologic cancer who underwent PE from April 2008 to April 2017. We describe the laparoscopic ultraradical surgery. This procedure removes basically all the pelvic organs and includes a reconstructive phase. In exenterative surgery, lymphadenectomy, radical hysterectomy and parametrectomy, rectal and bladder resection may be done by laparoscopy. The resected tissues are removed through the vagina. Patients underwent a thorough preoperative assessment to evaluate the indication for surgery. Three recurrent cervical cancer and 2 recurrent endometrial cancer patients underwent PE. 6 primary interval cytoreduction for ovarian cancer. 10 cases anterior and 1 case total exenteration, supralevator in 7 cases and infralevator procedure in 4 cases were performed.

We present a laparoscopic total pelvic exenteration, step by step. We describe in video format, the procedure to removal of the uterus, tubes, ovaries, parametrium, bladder, rectum, vagina, urethra, and a portion of the levator muscles. A perineal phase, resecting the anus, urethra, and portions of the vulva and finally the colostomy and urinary diversion are described in this video

Results

Operating time was 340,4 minutes. Mean blood loss was 793,1 ml, and 4 patients blood transfusion was necessary. Mean postoperative hospital stay was 12,2 days. The total morbidity rate was 63,6%; 5 (45,4%) patients had early complications, whereas 2 patients had late complications. Wound and hemorrhagic problems were common early complications (3/5), and urinary diversion fistula was serious late complication. Median follow-up was 25,1 months. The 2-year overall survival and 2-year disease-free survival were 69,45% and 55,1%, respectively.

Conclusions

PE is purely palliative procedure and the morbidity rate is still high, however is a potentially curative opportunity in gynecological malignancies with no other treatment options. Laparoscopic total PE for local relapses is feasible for selected patients treated by experienced teams in gynecological malignancies and laparoscopic advanced surgery

Analysis of the reproductive outcomes and the size of the unicornuate uterus measured by magnetic resonance imaging and their relationship

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Background

The relationship between adverse pregnancy outcomes and congenital uterine malformations, especially unicornuate uterus or hemi-uterus, has already been confirmed. Less favorable outcomes of pregnancy have been documented based on the size of the uterine. However, to date, the length of hemi-uterus have not been considered as a risk of adverse pregnancy outcomes. The aim of this study was to evaluate the relationship between the reproductive impacts and uterine length in a group of 149 women with unicornuate uterine in our hospital.

Methods

This is a retrospective cohort study. We searched our MRI clinic database from April 2010 to December 2017 to identify all patients with unicornuate uterus according to the ESHRE/ESGE classification of female genital tract malformations in the Obstetrics and Gynecology Hospital of Fudan University. All the length measurements were performed by experienced Radiologists using standard technique. According to reproductive outcomes, we divided all the 149 participants with complete pelvic MR imaging into six groups by the best reproductive outcomes: Group 1(primary infertility, n=21), Group 2(spontaneous abortion, n=34), Group 3(preterm delivery<28 weeks' gestation, n=6), Group 4(preterm delivery<35 weeks' gestation, n=7), Group 5(preterm delivery<37 weeks' gestation, n=11), Group 6(full-term delivery, n=70). The length of uterine, the length of uterine cavity, cervical length, Uterine wall thickness and endometrial thickness were recorded. The reproductive outcomes were followed, and relationship between the measurements and outcomes was analyzed.

Results

We found 14 patients (8.3%) had associated renal agenesis contralateral to the unicornuate uterus. Ectopic pregnancy occurred in 22 patients (13.2%). 9 patients had Intrauterine Fetal Death(IUFD)and 98 patients had live birth, of which abnormal fetal position at delivery occurred in 37 patients(37/98, 37.6%). Preterm delivery, premature rupture of membrane, Preterm premature rupture of membrane, intrauterine growth restriction(IUGR) and caesarean section delivery rates were 22.4%, 12.2%, 9.2%,10.2%,72.4%, respectively. The mean length of the uterine was 4.91 ± 0.55 cm. There were no significant differences in the uterine cavity length, cervical length, endometrial thickness and uterine wall thickness between the six groups while the uterine length ($P=0.001$), the ratio of uterine length and uterine cavity length($P=0.022$), the ratio of uterine length and cervical length ($P=0.047$) was statistically significant respectively. The majority (81.8%) of patients had uterine lengths ≥ 4.5 cm, while less than a fifth (18.2%) had uterine lengths > 4.5 cm. Women with uterine lengths ≥ 4.5 cm were more likely to experience full-term delivery compared with the other group($P<0.000$).The odds ratios for uterine length and uterine cavity length were 8.035 (95% CI: 3.014-21.424) and 0.321 (95% CI 0.146-0.707), respectively, according to ordinal logistic regression analysis.

Conclusions

The uterine length is a reliable prognostic factor to the gestational weeks of delivery and an appropriate antenatal surveillance factor of woman with unicornuate uterus.

The oncological safety of hysteroscopy as a diagnostic procedure in early-stage endometrial cancer: an Israeli gynaecologic oncology group study

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Background

Hysteroscopy in patients with endometrial cancer is associated with a risk for cancer cell dissemination within the peritoneal cavity. There are no sufficiently powered trials to clarify whether hysteroscopy is associated with a worse prognosis. In the current study, our purpose is to compare survival measures of women with early-stage endometrial cancer who underwent either hysteroscopy or a non-hysteroscopic procedure as a diagnostic procedure.

Methods

An Israeli Oncology Group multicentre study of 1324 patients with stage I endometrial cancer who underwent surgery between January 2002 and December 2014. Patients were divided into two groups: hysteroscopy and non-hysteroscopy (curettage or office endometrial biopsy). Clinical, pathological, and survival measures were compared between the hysteroscopy and the non-hysteroscopy groups.

Results

There were 355 patients in the hysteroscopy group and 969 patients in the non-hysteroscopy group. The median follow-up was 52 months (range 12-120 months). There were no differences between the hysteroscopy and the non-hysteroscopy groups in the 5-year recurrence-free survival (90.2 % vs 88.2 %; $p=0.53$), disease-specific survival (93.4 % vs 91.7%; $p=0.5$), and overall survival (86.2 % vs 80.6 %; $p=0.22$).

Conclusions

Our findings affirm that hysteroscopy as a diagnostic procedure does not compromise the survival of patients with early-stage endometrial cancer.

Nerve sparing anatomical radical hysterectomy with robotic fascia space dissection technique (FSDT) versus laparoscopic FSDT in Early Cervical Cancer: A Case-Control Study

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Background

To report our experience with robotic fascia space dissection technique (R-FSDT) comparing peri-operative results with a series of laparoscopic fascia space dissection technique (L-FSDT) for Nerve sparing radical hysterectomy in early cervical cancer.

Methods

From July 2014 to March 2018 all cervical cancer patients with preoperative FIGO stage IA2 to IB1 were assessed at preoperative magnetic resonance imaging scan and clinically confirmed by investigation under anesthesia, complying strictly with the FIGO criteria. 76 women underwent Nerve sparing radical hysterectomy with R-FSDT and 98 patients were submitted to Nerve sparing radical hysterectomy with L-FSDT (control subjects) for early cervical cancer. Surgical and post-surgical data of performed FSDT procedures were collected.

Results

The median estimated blood loss was 250 mL in the cases and 200 mL in the control subjects ($p = .72$). The median operative time, calculated from the beginning of intraperitoneal procedures to skin closure, was 246 minutes in the cases and 126 minutes in the control subjects ($p = .03$). The time taken to obtain a post-void residual urine volume of less than 50 ml after removal of the urethral catheter was 7.42 ± 2.35 d (5-18 d) in R-FSDT group and was 6.75 ± 2.73 d (5-15 d) in L-FSDT group ($P = 0.25$). The median time to discharge from the hospital was postoperative days 6 (range, 6-12) and 5.6 (range, 6-9) for R-FSDT and L-FSDT, respectively ($p = .31$).

Conclusions

The few differences we registered do not seem to be clinically relevant, thus making the 2 procedures comparable. Further prospective trials are needed to confirm our results.

Feasibility and safety of laparoscopic approach for early stage type II endometrial cancer staging: surgical and oncological outcomes from a large case-control analysis

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Background

type II endometrial cancers (ec) include a variety of histologies with no estrogen dependences. they have aggressive behaviors and poor oncological outcomes. although a comprehensive surgical staging is recommended, lymph node status evaluation is often omitted.

the aim of the study was to evaluate the impact of laparoscopy (lps) vs. laparotomy (lpt), on staging, surgical-related morbidity and oncological outcomes for the treatment of apparent early stage type II ec.

Methods

data of consecutive patients who underwent surgery for apparent early stage type II ec between 1981 and 2017 have been analyzed. lps was compared with lpt in terms of baseline characteristics (age, body mass index, charlson comorbidity index, asa score, history of cancer and previous abdominal surgery, grading, figo stage), surgical related outcomes (performance of lymphadenectomy/node dissection, number of nodes dissected and omentectomy, operation time, intraoperative estimated blood loss, intraoperative need for blood transfusions, hospital stay, postoperative complications) and oncological outcomes (disease-free (dfs) and overall survival (os)).

Results

108 patients were included: 61 (56%) and 47 (44%) in lps and lpt group, respectively. baseline characteristics were similar between the groups, except for history of abdominal surgery (lps: 15, 25% vs. lpt: 26, 55% patients, $p=0.001$). no significant differences have been registered in terms of histotype ($p=0.06$), grading ($p=0.91$), and FIGO stage ($p=0.07$).

Pelvic lymphadenectomy was performed in 40 (65%) lps and 30 (63.8%) lpt patients ($p=0.85$), while omentectomy in 13 (21%) lps and 9 (19%) lpt patients ($p=0.78$). the number of pelvic nodes dissected was 18 (6-42) for lps vs. 20 (2-67) for lpt group ($p=0.81$). para-aortic lymphadenectomy was performed in selected cases in both groups (lps: 9, 15% vs. lpt: 5, 11%; $p=0.52$), with no significant differences in terms on lymph nodes removed (lps: 4 (1-9) vs. lpt 7 (4-18); $p=0.07$). no differences in operative time (lps 165 vs. lpt 175 min., $p=0.2$) were registered. there were less intraoperative estimated blood loss (100 mL (10-1200) vs. 400 mL (50-1000) and less need for intraoperative blood transfusions (5% vs. 30%) in lps group, both $p<0.0001$. median hospital stay was shorter among lps group (3 vs. 8 days, $p<0.0001$). similar results in postoperative complications (pelvic abscess, urinary tract infection, wound infection, thromboembolic events) were observed between the groups. with a median follow up of 39 months, recurrence rate was 26% in lps vs. 38% in lpt group, $p=0.14$. no differences in oncological outcomes were registered: dfs: lps 29 (1-131) vs. lpt 42 (1-171) months, $p=0.39$; os: lps 37 (1-131) vs. lpt 45 (1-171) months, $p=0.10$.

Conclusions

the accuracy of the staging in patients with type II ec was not influenced by the surgical approach. when compared with lpt, lps treatment was associated with similar survival and better surgical outcomes.

**ES27-0441 -
Best Selected Abstracts 3**

A European survey on the conservative surgical management of endometriotic cysts on behalf the ESGE Special Interest Group on Endometriosis

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Background

Despite much scientific activity and research regarding endometriosis over the last 30 years, several issues on the conservative management of endometriotic cysts are still unclear.

Methods

The present survey was conducted among gynaecological surgeons, members of the European Society for Gynaecological Endoscopy (ESGE), in order to assess the surgical practice of the conservative management of endometriotic cysts in women of reproductive age. From June 1 to July 15, 2017, ESGE members were invited to answer a 28-item online questionnaire accessible through the ESGE website. Of the gynaecologists 60.6% worked in a University teaching and 39.4% in a NHS hospital, while 65% of them performed more than 100 laparoscopic interventions per year.

Results

The current practice for the conservative management of endometriotic cysts was laparoscopy in 84.9%, expectant management in 12.1% and laparotomy in 3%. 75.8% of the participants did not suggest medical treatment prior to surgery and the preferred surgical approach was cystectomy in 69% of the cases, while parameters which determined the preferred surgical method were diameter of the cyst (62%) and bilaterally (53%). The type of energy used was in the majority of cases bipolar (83%), 71.4% did not reconstitute the ovary and 41% of the answers included the administration of adhesion barrier agents. The primary surgical end-point was ovarian reserve (50%), which was tested preoperatively in 51.8%, mainly (91%) with anti-mullerian hormone. In case of incidental DIE, 55.4% of the answers included the concomitant treatment of it, while 71% of the participants consider that a "pelvic surgeon" should be the ideal one to manage effectively endometriosis

Conclusions

The majority of the participants (74%) of this survey consider that there is insufficient scientific evidence regarding the conservative management of endometriotic cysts

Comparison of two surgical techniques for the creation of a new vagina in patients with Mayer-Rokitansky-Küster-Hauser Syndrome.

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Background

Retrospective comparison of the anatomical and functional outcomes and the complications of two surgical techniques used to create a new vagina in patients with Mayer-Rokitansky-Küster-Hauser Syndrome (MRKH): vaginoplasty without interposed tissue and the laparoscopic Davydov's procedure.

Methods

Thirty women suffering from congenital vaginal agenesis with MRKH syndrome were retrospectively included in the study covering 15 years, between January 2002 and November 2017. Between January 2002 and February 2012, 12 patients were underwent the vaginoplasty without interposed tissue technique. From June 2011 to August 2017, laparoscopic Davydov's procedure was performed on 18 patients. Due to intra-operative technical difficulties, two of them finally underwent vaginoplasty without interposed tissue.

Results

The patient's mean age was $17,9\pm 4,7$ years (range: 11 to 39) at the diagnosis and $19,7\pm 5,5$ years (range 15 to 39) at the surgery. The mean length of vagina before the surgery was measured at 1,6cm. The operating time of a conventional vaginoplasty varied between 25 and 60 minutes, while Davydov's procedure duration fluctuated between 80 and 140 minutes. Hospital stay was 4 to 6 days for the conventional technique, and 2 to 5 days for the Davydov's procedure.

The average vaginal length obtained with conventional vaginoplasty at 6 months was $5,9\pm 1,4$ cm, and $6,2\pm 0,8$ cm with the laparoscopic Davydov's procedure.

Conclusions

Anatomical results were excellent for both surgeries. Although the duration of surgery is longer with Davydov's technique, hospitalization length and post-operative care are shorter as this procedure leads to decreased post-operative pain.

**ES27-0486 -
Best Selected Abstracts 3**

Value of uterine imaging screening prior to egg donation programme

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Background

To study the value of a one stop hysteroscopy (HSC) / ultrasound (US) examination and magnetic resonance imaging (MRI) to predict the implantation rate in patients entering an egg donation programme.

Methods

Patients older than 40 years entering an egg donation programme received a one stop HSC/US examination and MRI. All HSC and US exams were performed by the same examiner and this examiner also classified the MRI into normal or abnormal. For all HSC/US abnormal findings a standard surgical and/or medical treatment protocol (operative hysteroscopy and/or GnRh analogues) was initiated prior to egg donation. Abnormal findings of the junctional zone (JZ) in MRI with normal HSC/US findings did not result in any pre-egg donation specific treatment to improve implantation. Delivery rate (DR) perdonation was the primary outcome and compared for the different diagnostic – therapeutic patient collectives.

Results

114 patients entered the egg donation programme between 2007 and 2016.

Findings

38/114 women (33 %) showed normal findings in the one stop HSC/US examination from whom 7/38 (18 %) had abnormal MRI. 76/114 women (67 %) showed abnormal findings in the one stop HSC/US examination: 13/76 women (17 %) had major uterine pathology like myoma, adenomyosis, congenital malformations, full Ashermann and 63/76 women (83 %) had subtle uterine abnormalities including endometrial polyps, strawberry pattern, dysmorphic uterus intra uterine adhesions, hypervascularisations or combination of diseases. MRI was abnormal in 38/63 patients with subtle uterine abnormalities (60 %).

Delivery rate

The DR in women with both normal HSC/US and MRI findings was 74,19 % (23/31) and in the women with normal HSC/US but abnormal MRI 0 % (0/7). Out of 13 patients treated for major uterine pathology, 6 (46 %) patients delivered a healthy baby. Patients treated for dysmorphic uterus had a DR of 88 % (16/18) The DR for patients treated for subtle endometrial lesions was 73,3 % (22/30). The remaining patients with a combination of diseases or minor acquired cavity deformations had a DR of 46, 6 % (7/15).

Conclusions

Performing the one stop HSC/US exam in women over 40 years prior to the egg donation programme detects a significant amount of abnormalities. Treating dysmorphic uteri and endometrial subtle lesions results in a similar excellent delivery rate as compared with patients with a normal uterus on HSC, US and MRI. MRI prior to egg donation with evaluation of the JZ myometrium detects in 6 % pathology which was not seen with other exams.

First 1000 vNOTES operations: prospective complication data

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Background

Transvaginal Natural Orifice Transluminal Endoscopic Surgery (vNOTES) is a new approach to endoscopic surgery, leaving no visible scars. A prospective randomized controlled double blind study (HALON trial) demonstrated significant benefits of vNOTES over conventional laparoscopy: shorter operating and hospitalization time, more patients discharged on the day of the surgery, lower pain scores, less analgesics used. This trial also demonstrated a lower complication rate for vNOTES compared to conventional laparoscopy. The aim of this study is to further assess the complication rate of vNOTES surgery on a larger scale.

Methods

The complication data of a single surgeon's first 1000 vNOTES operations were prospectively collected between 2013 and 2018. All pure vNOTES procedures were registered, including hysterectomies, adnexectomies, ovarian cystectomies, salpingectomies, myomectomies (via anterior and posterior colpotomy), adhaesiolysis, appendectomies, omentectomies and sentinel lymph node procedures for endometrial cancer.

Results

The conversion rate to hybrid vNOTES, conventional laparoscopy or laparotomy was less than 0.5% . The intra-operative complication rate was 1%; the most frequent intra-operative complications were bladder perforation (in all cases primarily sutured intraoperatively without fistulation) and bleeding. The total postoperative complication rate was less than 2%: the majority of postoperative complications were Clavien-Dindo 1 and 2 (cystitis, hematoma). There were less than 1% Clavien-Dindo 3 complications (reinterventions for vaginal vault bleeding or granulation tissue, hematoma drainage, adhaesiolysis) and no Clavien-Dindo 4 or 5 complications.

Conclusions

These data confirm low complication rates for this new surgical approach. It is important to take into account that these data include the author's first 1000 cases and therefore include all the patients from the entire development stage of this new technique. After the initial development stage of the vNOTES approach, there was a long standardization stage where the techniques were still frequently modified. By now the vNOTES technique is standardized and when taught in a structured way (theory – dry lab – live surgery – proctoring), the learning curve for surgeons adopting the vNOTES approach should be significantly shorter. This will most likely reduce the complication rate further. vNOTES complication data are currently being collected globally in the prospective complication registry of the International NOTES Society.

Tubal flushing for subfertility: HyFoSy could enhance the chances of spontaneous clinical pregnancy in women undergoing infertility investigations?

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Background

To evaluate if the tubal flushing due to HyCoSy (Hysterosalpingo-Contrast Sonography) with ultrasound gel foam as contrast media (HyFoSy) could enhance the chances of spontaneous clinical pregnancy in women undergoing infertility investigations.

Methods

155 infertile patients, who underwent three dimensional (3D) HyFoSy for evaluation of the tubal patency, between 2015 and 2017, in our institution, were included in this study. HyFoSy was performed with ExEm foam gel. All the patients underwent to a follow up by means of a phone interview at 12 months after HyFoSy. Exclusion criteria were female age ≤ 40 years, severe male infertility and sonographic sine of hydrosalpings. Primary outcome was the time of initial clinical pregnancy (defined as a sonographically visible gestational sac) after HyFoSy.

Results

The mean duration of subfertility was 17,4 months. Primary infertility was present in 63% of patients. The clinical pregnancy rates was 47.7 % (n=74) achieving the peak within 3 months (n=26,16.7%) . 63 (40.6%) conceived spontaneously while 11 (7%) with ART.

Conclusions

The clinical impression of an enhanced pregnancy rate after performing HyFoSy could be confirmed. Tubal investigation with this technique has a function of diagnostic procedure and of increasing pregnancy rates in subfertile patients. Tubal flushing due to HyFoSy improves the chance establishing a spontaneous pregnancy of 40% within 3 months.

**ES27-0045 -
Best Selected Abstracts 4**

The urodynamics and survival outcomes of different methods of dissecting the inferior hypogastric plexus in laparoscopic nerve-sparing radical hysterectomy : a randomized controlled study

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Background

Little data exists about the impact of dissection methods on the bladder function during the nerve-sparing radical hysterectomy (NSRH). This randomized controlled trial was to compare the urodynamic and survival outcomes of different methods dissecting the inferior hypogastric plexus (IHP) during total conventional laparoscopic NSRH.

Methods

Eligible patients presenting with stage IB cervical cancer from May 9, 2013 to Oct 27, 2015 were randomized at a ratio of 1:1 and subjected to waterjet (study group) or traditional blunt (control group) dissection of the IHP for laparoscopic type C NSRH. The participants were subjected to urodynamic evaluations before and after NSRH. The primary measurement was the proportion of patients with residual urine (RU) \leq 100 ml, and the secondary measurements included urodynamic parameters, disease-free survival (DFS) and overall survival (OS).

Results

In total, 191 women met the inclusion criteria, and 160 patients were included in the final analysis, with 80 randomized to each group. At 14 days after NSRH, the study group had more patients with RU \leq 100 ml than the control group (82.5% vs 62.5%, $P=0.005$). Study group had similar urodynamic outcomes of preoperative and postoperative tests. Comparison with the study group and preoperative tests revealed control group had significant bladder function impairment at 4 months after NSRH. After a median follow-up of 33 months, the dissection methods had no significant impact on the DFS or OS.

Conclusions

Waterjet dissection of the IHP in laparoscopic NSRH resulted in a more rapid return of normal urodynamics without compromising the survival outcome.

Preliminary results of the outset-1 (obstetric outcomes after transvaginal specimen extraction in gynaecological laparoscopy) clinical trial

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Background

Laparoscopic myomectomy represents the standard surgical approach for the management of subserosal/intramural myomas. different techniques for specimen retrieval after laparoscopic myomectomy have been reported. in-bag trans-vaginal specimen extraction after laparoscopic myomectomy has been described as a feasible and safe technique. however few data are available regarding pregnancy and fetal maternal outcomes following this surgery. we here report the preliminary results of the outset-1 (obstetric outcomes after transvaginal specimen extraction in gynecological laparoscopy) clinical trial (nct03439956).

Methods

we retrospectively collected data of consecutive patients who underwent laparoscopic myomectomy from 2004 to 2016. patients who had in bag trans-vaginal specimen extraction (te-group) were compared with the ones who had power morcellation of the myoma(s) and extraction through the trocars (pm-group). analysis focused on patients who delivered (vaginal delivery or cesarean section) after surgery. baseline characteristic and surgical details have been evaluated. maternal outcomes (adoption of assisted reproduction technology (art), term pregnancy delivery, gestational age at delivery, cesarean section, post-partum complications (fever, anemia), epidural analgesia, episiotomy) and neonatal outcomes (weight at birth, apgar score at 1 and 5 minutes, neonatal intensive care unit admission) were investigated.

Results

twenty-eight women were included, 12 (43%) in te-group and 16 (57%) in pm-group. no significant differences have been registered in terms of body mass index (21 ± 2.1 vs. 24 ± 6.04), rate of single myoma (9, 75% vs. 10, 62.5%), rate of previous abdominal surgery (5, 41.6% vs. 8, 50% patients) and previous vaginal delivery (3, 25% vs. 5, 31.2% patients), te-group vs. pm-group, all p-values >0.05 . surgical outcomes did not differ between te-group vs. pm-group: operative time (81 ± 26 vs. 73 ± 33 min, $p=0.48$), blood loss (182 ± 131 vs. 194 ± 216 ml, $p=0.87$), intraoperative complications (none in both groups, $p=1$), post-operative complication (none in both groups, $p=1$) and hospital stay (2 ± 0.7 vs. 2.6 ± 1.7 days, $p=0.26$). among the investigated maternal-fetal outcomes no statistical differences were found: adoption of art (2, 16.6% vs. 2, 12.5% patients, $p=1$), term delivery rate (10, 83.3% vs. 10, 62.5% deliveries, $p=0.40$), gestational age at the delivery (263 ± 17.05 vs. 267.8 ± 11.68 days, $p=0.38$), cesarean section (8, 66.6% vs. 11, 68.7% section, $p=1$), post-partum complication (4, 33.3% vs. 5, 31.2%, $p=1$), epidural analgesia (1, 8.3% vs. 3, 25%, $p=0.61$), episiotomy (2, 50% vs. 1, 20%, $p=0.52$), neonatal weight (2837 ± 577.47 gr. vs. 2982 ± 624.12 gr, $p=0.53$), apgar score at 1 (9 ± 1.97 vs. 9 ± 1.21 , $p=1$) and 5 minutes (10 ± 1.16 vs. 9 ± 0.5 , $p=0.69$) and neonatal intensive care unit admission (none in both group, $p=1$).

Conclusions

the preliminary results of the outset-1 trial might support the adoption of in-bag trans-vaginal specimen retrieval after laparoscopic myomectomy since not associated with a worsening of maternal and fetal outcomes. more data is warranted to confirm our findings.

First results of laparoscopic abdominal cervical cerclages placed in the second trimester of pregnancy

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Background

Cervical insufficiency or weakness is defined as the inability to retain an intrauterine pregnancy to full term due to structural or functional insufficiencies of the cervix.

In 1965, transabdominal cerclage was first described in a patient for whom a vaginal cerclage was deemed impossible.

In recent years, laparoscopic abdominal cervical cerclages have been described in several case series, and results have compared favourably with the traditional laparotomy approach. The advantage of the laparoscopic cerclage is quick recovery and less operative trauma.

The preconceptional laparoscopic abdominal cerclage is easier to carry out and should be preferred.

Methods

I present the results of 4 laparoscopic transabdominal cervical cerclages placed during the second trimester of pregnancy.

All 4 patients presented at the clinic during the first trimester of pregnancy. All patients had a history of vaginal cerclages and spontaneous abortions in the second trimester of pregnancy or/and very preterm deliveries in the second trimester.

The laparoscopic abdominal cerclages were placed at 12-13 weeks of pregnancy using Mersilene 5 mm tape. The bladder flap was opened and windows were created in the broad ligaments by using the SonoSurg ultrasound scalpel. The Mersilene tape was placed at the level of the internal os of cervix and tightened anteriorly.

Results

There were no intraoperative complications during the surgeries. All patients left the clinic on the second day after surgery.

One baby was delivered by a caesarean section at gestation 29+5 due to preterm rupture of membranes after the maturation of lungs with corticoids. Magnesium sulphate was also used before the caesarean section to protect the brain of the foetus. A girl with birth weight of 1010 grams with good Apgar scores was born.

One baby was delivered by elective caesarean at gestation 37+1 and a boy with birth weight of 2884 g in a good condition was born.

The two remaining patients are still pregnant and their pregnancies have continued normally. We plan to perform elective caesarean sections after 37 weeks of pregnancy.

Conclusions

Laparoscopic abdominal cervical cerclage during the second trimester of pregnancy is technically feasible. Good laparoscopic skills are essential for the surgeon.

The pain of the gynaecological laparoscopic surgeon

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Background

Laparoscopy poses unique ergonomic challenges for the gynaecological surgeon. We sought to investigate the prevalence of musculoskeletal distress experienced by specialist gynaecologists, the risk factors associated with such injury, the consequences of injury and whether prior knowledge in ergonomics mitigated the risk of injury.

Methods

An anonymised questionnaire was distributed via SurveyMonkey to all members of the British Society for Gynaecological Endoscopy (BSGE) and Fellows of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG).

Results

467 specialists completed the questionnaire.

The majority of specialists experienced some degree of musculoskeletal pain, with the back (87.1%), right shoulder (63.7%) and neck (62.1%) being the regions most commonly affected. Pain in the neck, shoulders, wrists, thumbs, fingers and both lower limbs was significantly more common among female specialists.

14.2% of specialists had taken sick leave as a result of pain with 12% seeking medical attention and 0.8% actually requiring surgery. Moreover, one in six specialists had to alter their surgical practice as a result of the pain experienced. Of greater concern was the finding that almost 1% of specialists admitted to having had a surgical complication as a result of pain experienced during surgery.

Factors which reduced the likelihood of back pain were the surgeon's weight, a hand size greater than 6.0 and the performance of only 0-25% of surgery laparoscopically. For right shoulder pain, being left-handed, taller and the number of years performing surgery all increased the risk of pain while performing up to 12 hours of laparoscopic surgery per week reduced the risk. Regarding neck pain, the use of a step or platform significantly reduced the risk of injury.

Prior instruction in theatre or operating ergonomics did not significantly improve current knowledge of ergonomics nor reduce the likelihood of suffering musculoskeletal distress.

Conclusions

The majority of specialist gynaecologists suffer pain as a result of laparoscopic surgery.

It is clear that current training for gynaecological laparoscopy does not adequately address the issue of operating ergonomics and this is having a significant impact on the surgeon's health.

Mapping of mental load dynamics across standard and robot- laparoscopic hysterectomy

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Background

Laparoscopic hysterectomy is a complex procedure. The mental load on the surgeon during the different stages of the procedure will fluctuate. Mapping the mental load is relevant in designing hysterectomy curriculum, planning clinical training, understanding error map during hysterectomy and to enable application of educational techniques such as deliberate practice. Secondly we will compare the mental load dynamis reported during standard total laparoscopic hysterectomy (S-TLH) or robot-assisted (RA-TLH). This will have implications for many aspects of surgical education.

Methods

This pilot study recruited 8 gynaecologists (4 specialists and 4 fellows) to this multicentre study at three hospitals. This study was registered as a service evaluation. Prospective data was collected at the end of a S-TLH or RA-TLH in relation to patient demographics, surgical indications, operative data and surgeon feedback regarding mental load (NASA-TLX and SMEQ).

Results

Data was collected during 83 hysterectomies. 49 RA-TLH, 34 S-TLH (19 TLH, 15 SLH) were performed. Median BMI was 30. Indications included stage 1 endometrial cancer (41), stage 1a1 cervical cancer (1), DUB (12), miscellaneous benign indications (29). RA-TLH was associated with significantly less mental load during ureteric dissection, IP ligament division, bladder dissection, uterine artery division, colpotomy and suturing ($P < 0.05$). During both modalities, uterine artery ligation was associated with the highest level of mental load.

Conclusions

This is the first study to explore how mental load fluctuates during the different subtasks of minimally invasive hysterectomy. The authors identified uterine artery ligation and division as the peak of mental load. In addition, we also found that RA-TLH in general leads to lower levels of mental load across each of the subtasks except for bladder dissection. Robot assisted surgery can offer benefits to the surgeon in terms of human factors.

ES27-0075 -

Best Selected Videos 1

Creating a retrorectal space: a method for opening Douglas pouch obliteration

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Background

In cases with Douglas pouch obliteration caused by severe endometriosis, we usually approach from the lateral side of the rectum to determine the rectal outline. This approach enables us to manage the adhesion in most cases. However, despite this approach, we sometimes encounter difficulty in more severe cases. Based on the rectal anatomy, we present the steps of the lateral approach and a method of creating a retrorectal space in order to increase rectal mobility and to identify the adhesion lesion safely and thoroughly.

Methods

First, we identify the ureter through the pelvic peritoneum at the point of the common iliac artery. The Okabayashi's pararectal space is created widely with blunt dissection to keep the hypogastric nerve and continuous pelvic nerve plexus off to the pelvic side. The space filled with loose connective tissue around the rectum is opened by incising the lateral rectal fossa. This space is the same dissection layer in the total mesorectal excision for early rectal cancer. Then, the space is dissected anteriorly along the mesorectal surface. In most cases, we can cut the central firm adhesion between the rectum and the retrocervix because the rectal outline is determined in the prior step. In more severe cases, the dissection of the space is advanced around the rectum to the dorsal side to create the retrorectal space. By connecting the left and right spaces, the rectum is lifted and the mobility is increased.

Results

This approach makes it easier to recognize the adhesion lesion by simply pulling the rectum in various directions.

Conclusions

The blood supply of the rectum comes from the vessels in the mesorectum; hence, lifting the rectum while wrapped in the mesorectum is a safe method. Even in cases without rectal resection, creating a retrorectal space is a useful technique because the rectal mobility is improved.

<https://player.vimeo.com/video/268367239?autoplay=1>

Laparoscopic repair of an intrauterine fallopian tube incarceration as complication of curettage

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Background

A 29-year-old woman experiencing a non evolving pregnancy at 8 weeks underwent a curettage. Bleeding was estimated to be 900 cc. After nine months, she complained from abnormal vaginal discharge. Ultrasound evaluation showed a right para-uterine mass. She reported a maternal medical history of ovarian cancer in a context of Lynch syndrome and there had been no testing for this syndrome in our patient. A MRI described an right hydrosalpinx of 12mm diameter, with a suspect fimbrial lesion of the tuba. It also showed a 7mm endometriosis nodule of the uterine torus

Methods

Considering the familial history of the patient, we decided to explore the tuba by laparoscopy and to also perform an hysteroscopy, considering the pregnancy desire.

Results

Hysteroscopy was performed as a first step, during which fallopian tube incarceration was suspected: a defect of the uterine wall was observed at the level of the fundus, through which there was protusion of a tubal fimbriae. The rest of the cavity was normal. The laparoscopic view of the pelvis confirmed the incarceration of the right fallopian tube through the uterine wall. The tube was carefully extracted out of the uterine defect, using minimal bipolar coagulation. The tube was totally freed from the uterus. The uterine wall defect was repaired with an X point with vicryl 1, and a tubal patency test was performed, which was positive on both sides. As phimosis responsible for the hydrosalpinx had been treated, salpingectomy was not performed. The post-operative period was uneventful. The patient was discharged on the next day, . A saline hysterosonography was performed 3 months later showing a normal cavity.

Conclusions

Curettage for miscarriage or undesired pregnancy is not exempt from complication. The most common are hemorrhage, simple perforation, or infection. Risks for other complications are not excluded. Intrauterine fallopian tube incarceration is uncommon but can affect fertility. This diagnosis is important to avoid destruction of the fimbriae, necrosis of the tube and also to reduce the risk for ectopic pregnancy.

<https://player.vimeo.com/video/272667420?autoplay=1>

ES27-0181 - Best Selected Videos 1

Laparoscopic decompression of sciatic and pudendal nerve: Intrapelvic nerve compression with fibrous tissue is a rare cause of pudendal neuralgia and sciatica

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Background

A step-by-step explanation of the laparoscopic approach to fibrosis entrapping the nerves of the sacral plexus using video (instructive video).

Methods

The 35-year-old woman complained about severe dyspareunia and pelvic pain (visual analog scale pain score was 10). Her perineal pain has been radiating from left side of perineum to the lower limb for approximately 24 month period. Pain was not relieved with the medical, physical and nerve blocks therapies. The magnetic resonance imaging revealed hyperintense signals on the lumbosacral trunk. Laparoscopic decompression of the lumbosacral trunk, the sciatic and the pudendal nerve was performed. Fibrotic tissue surrounding the nerves was removed with cold laparoscopic scissors (Ethicon Inc, EndoSurgery, Cincinnati, OH, US) and the material was sent for histopathological analysis.

Results

The total operation time was 45 minutes and the hospital stay was 24 hours. There were no complications during and after surgery. The definite diagnosis of "fibrosis surrounding the sacral plexus" which was detected in the operation, was confirmed by histopathological diagnosis. She reported complete pain relief for her sciatica and dyspareunia after 6 months of surgery (visual analog scale pain score was 1 point).

Conclusions

Laparoscopic management of the sciatica and pudendal neuralgia causes by fibrous tissue surrounding the sacral plexus is observed as a safe, feasible and effective surgical procedure with a high success rate. Although, MRI scan is a useful tool for diagnosing, neuropelvic approach is essential in order to obtain good treatment results.

<https://player.vimeo.com/video/269749747?autoplay=1>

ES27-0265 - Best Selected Videos 1

Laparoendoscopic single site for ovarian cancer staging surgery with infrarenal para-aortic lymphadenectomy

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Background

To demonstrate the procedure of laparoendoscopic single site (LESS) staging surgery with infrarenal para-aortic lymphadenectomy for an early-stage ovarian cancer.

Methods

A 45-year woman presented with pelvic mass on gynecologic examination. A serum CA-125 of 5910 U/mL [normal: <35]. CT scan revealed a mixture of solid and cystic components (70x77x71mm) arising from right ovary and characterized by the “ovarian vascular pelvic” sign. No other positive results were found, and a clinically early-stage ovarian cancer was suspected. LESS staging surgery was performed by an experienced surgeon in our department. A soft port was inserted through a 2 cm single vertical umbilicus incision. A rigid 30-degree, 10-mm laparoscope and a 45 cm harmonic scalpel were applied in the operation.

Results

The surgery lasted 280 min, the volume of blood loss was 50 mL in total, without intra and postoperative complications. We skilled “hide” the incision to achieve a perfect cosmetic result. The histopathologic findings supported high grade serous ovarian cancer (HGSOC) of right ovary, meanwhile the left fallopian tube was involved, and there were negative 34 pelvic and 18 para-aortic lymph nodes in total, therefore the stage of IIA was diagnosed. The patient recovered quickly, exhaust time was 2 days after operation, and the wound was well-healed.

Conclusions

We performed a LESS staging surgery for early-stage ovarian cancer successfully. The marked advantage of LESS is an efficient and safe way to extract unknown sample. During the surgery, we showed the useful and experienced suspension skill to perform pelvic and infrarenal para-aortic lymphadenectomy. Furthermore, compared with multiport laparoscopy, the central location at the umbilicus of LESS can provide more easily access to bilateral pelvic sides and upper abdominal paraaortic regions, facilitating bilateral obturator/infrarenal paraaortic lymphadenectomy and parametrectomy. And also, a T-shaped drainage tube was placed through the vaginal cuff, which was the lowest point in the pelvic cavity, to improve drainage. The video demonstrated LESS approach was feasible, cosmetic and safe access in malignant gynecologic surgery.

<https://player.vimeo.com/video/269940492?autoplay=1>

**ES27-0269 -
Best Selected Videos 1**

Laparoscopic approach of caesarean scar ectopic pregnancy: 2 case reports

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Background

The incidence of cesarean scar pregnancy although still rare, has been increasing steadily in the last years. Many therapeutic options are available, medical or surgical, but the current literature suggests that laparoscopic approach with ectopic pregnancy resection is the best option.

Methods

We present 2 cases of cesarean scar ectopic pregnancies managed by laparoscopy.

Results

The first case involves a 36 years old woman with a previous cesarean section and a 6 weeks pregnancy. The transvaginal ultrasound showed a cesarean scar ectopic pregnancy and raised suspicion of a uterine arterio-venous fistula. The diagnosis was confirmed by MRI angiography. Since uterine artery embolization is not available at our center, and the patient desired to preserve fertility, laparoscopic coagulation of the uterine arteries was decided. In the second case we present a 30 years old woman with a previous cesarean section diagnosed by transvaginal ultrasound with a 6 weeks live cesarean scar ectopic pregnancy. The patient received a two-dose Methotrexate protocol but after 72 h the embryos cardiac activity was still present. Laparoscopic treatment was decided aiming to extract the pregnancy and repair the scar defect.

Conclusions

Laparoscopic approach represents a safe and efficient therapeutic option for the treatment of the cesarean scar ectopic pregnancy.

<https://player.vimeo.com/video/269944578?autoplay=1>

**ES27-0334 -
Best Selected Videos 1**

A case series on interstitial ectopic pregnancy. A new novel approach for laparoscopic treatment – a single centre study

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Background

Six cases of interstitial ectopic pregnancies were identified over an 18 month period in a large district general hospital under the care of an advanced laparoscopic surgeon. All cases had transvaginal ultrasound scans to confirm the IEP using the Timor-Tritsch et al criteria.

Methods

Expedited theatre preparation was facilitated for all cases with perioperative medical management of 400mcg Misoprostol per-rectum (PR) at anaesthetic induction.

All 6 patients had laparoscopic approach to the abdomen using modified Palmer's point (MPP) for entry, where the Veress needle is inserted 8cm lateral from the midline and 4cm inferior to the costal margin at the left upper quadrant of the abdomen.

Operative laparoscopy revealed two ruptured IEPs with an average of 3 litres of hemoperitoneum within the abdominal cavity prior to laparoscopic surgery.

Since IEPs implant in the interstitial part of the fallopian tube, which is located in the uterine wall, the area has a rich blood supply by the Sampson artery, which is tributary of both the uterine and the ovarian arteries. Therefore a mechanical vicryl Endoloop was placed around the base of the IEP to occlude vascular supply.

The next step was the subserosal infiltration of the base of the IEP using a pudental needle with 60mls of 20IU of Pitressin diluted in 200ml of NaCl 0.9% (modified Dillon's technique) instead of the original dilution in 100ml described by Dillon in the 1960s.

After the blanching tissue effect was achieved, a cornuostomy was performed with the Harmonic ACE®+ 7 Endo Shears (Ethicon®) and the IEP was safely excised and removed carefully via a 10mm endoscopic bag for retrieval of tissue (Bert) minimizing trophoblastic spread.

The cornua was closed in two layers using a continuous Stratafix™ Polydioxone PDO (Ethicon®) biderictional suture with good haemostatic effect.

Finally, an ipsilateral salpingectomy was performed to reduce risk of recurrence on the same side, since all patients had normal contralateral tube and ovary.

PerClot® - a polysaccharide hemostatic system (CryoLife®) was applied to the sutured surface for haemostasis as well as Hyalobarrier® anti-adhesion gel.

Results

The average estimated intraoperative blood loss was less than 500mls. Average operative time was 105 minutes. Average hospital stay was 18 hours.

All patients were discharged home on simple oral analgesia (Paracetamol & Ibuprofen) and a 2-week follow-up with quantitative serum beta human chorionic gonadotrophin (β hCG) titre was negative in all cases.

Conclusions

We have demonstrated that minimal access surgery for the management of interstitial ectopic pregnancy is a safe, feasible and efficient management options in the hands of an expert team.

<https://player.vimeo.com/video/293297546?autoplay=1>

ES27-0423 - Best Selected Videos 1

Laparoscopic management of a rudimentary uterine horn

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Background

We describe the case of a 12 years old girl who had no medical history. She had her first menstruation at 11 with major left pelvic pain occurring each month. Ultrasonography shows a duplication of the uterus with a liquid collection on the left side: this type of malformation is called accessory and cavitated uterine mass (ACUM). A medical treatment was initiated with progestin. The MRI shows a left non communicating rudimentary horn with a unicornuate uterus. No other malformation is present, particularly in the kidneys

Methods

A primary vaginal endoscopy is performed showing a single cervix without vaginal malformation. It is decided to perform a laparoscopic excision of the left rudimentary horn. We placed A 10mm optical port into the umbilicus and 3 accessory 5mm trocars. Evaluation of the abdominal cavity shows 2 normal adnexas with normal ovaries..

Results

We decide to start with the left salpingectomy using the Ligasure™ device staying close to the tube to preserve the ovarian vascularization. The remnant fimbria must be removed to avoid cancerization. Then, the vesicouterine septum is divided until we reach the cervix to dissect the bladder from the rudimentary horn. The broad ligament is fenestrated in order to push the left ureter laterally. The utero ovarian pedicle is transected with the Ligasure™ device, the left ovary will be preserved and vascularized by the left IP ligament. We dissect then the left uterine artery. The posterior peritoneum is opened. The resection of the rudimentary horn is performed by means of a monopolar hook. The dissection is performed slowly with selective coagulation until we reach the cavity of the horn, with old blood flowing out. The entire cavity is removed and we confirm the absence of communication with the other part of the uterus. Uterine reconstruction is performed with inverted separated stiches of 2-0 braided suture and finally an anti-adhesion barrier is placed

Conclusions

Laparoscopic management of a uterine rudimentary horn is feasible with a satisfactory uterine reconstruction. This is not the first case of this surgery performed by laparoscopy. A similar case has been published in 2015 and recently an other video² has been published describing two other cases.

<https://player.vimeo.com/video/272627803?autoplay=1>

**ES27-0332 -
Best Selected Videos 1**

Two surgical techniques using CO2 Laser in the laparoscopic management of ovarian endometrioma

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Background

Laparoscopic management of ovarian endometrioma must achieve two conflicting goals: complete removal of the endometrioma capsula to avoid early recurrence of endometriotic cysts while preserve as much normal ovarian cortex as possible.

CO2 Laser is a safe energy that offers various surgical techniques according to the size of the endometrioma and the clinical history of the patient.

Methods

Using CO2 Laser in the surgical treatment of endometriotic cysts.

Results

The first surgical technique presented consists in the ablation of the endometrioma wall using CO2 Laser following the cyst fenestration and the chocolate liquid suction.

The second surgical procedure consists in a partial cystectomy by Excision of the larger part of the cyst wall followed by the vaporization of the remaining endometriotic ovarian tissue close to the hilus.

Conclusions

Laparoscopic CO2 laser management of ovarian endometrioma is a safe, efficient and reproductive technique achieving a thorough endometriotic tissue removal and healthy ovarian cortex preservation. Compared to conventional laparoscopic cystectomy, CO2 laser learning curve is shorter.

<https://player.vimeo.com/video/269973412?autoplay=1>

ES27-0079 - Best Selected Videos 1

Step by step surgical procedure for a class U4a C0 V0 uterine malformation

Stavros Karampelas¹, Michelle Nisolle², Cecile Crucifix¹

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²University of Liege, Gynecology, Liege, Belgium

Background

Case report of a 34 year old patient with a primary infertility and dysmenorrhea grade III. Gynecologic examination is normal. Ultrasound: Presence of a rudimentary uterus visualized in the right ovarian fossa. MRI: Visualization of a left-side uterine cavity extending by a single cervix and a single vagina with no abnormality demonstrated. In the right ovarian fossa region there is an ovoid structure of blind appearance composed of an endometrium evaluated at 3cm of greater axis. There is no clear visible communication between this cavity and the first described uterine cavity. Hysterosalpingography: Visualisation of a non communicating left uterine horn. Abdominal Ultrasound: Absence of the right kidney, left kidney is normal. Diagnosis: Uterine malformation type U4 C0 V0 (Classification ESHRE)

Methods

Surgical management: 2 step surgical management starting with a diagnostic hysteroscopy followed by a laparoscopic resection of the uterine rudimentary horn and laser vaporisation of the peritoneal endometriosis. Hysteroscopy reveals a tubular cavity with a left ostium. No communication with the rudimentary horn. Laparoscopy reveals the presence of the unilaterally formed uterus on the left side and a rudimentary horn on the right side. Both ovaries and Fallopian tubes are normal. Visualisation of superficial endometriosis of the peritoneum of Douglas pouch, of the right ovarian fossa and of both utero-sacral ligaments. A section of both utero-sacral ligaments and vaporisation of the peritoneal endometriosis was performed using CO2 laser. Coagulation and section of the mesosalpinx, the right utero-ovarian ligament, the right round ligament and opening of the anterior and posterior part of the broad ligament. Distinction of two vascular pedicles. The first towards the rudimentary horn which was coagulated and sectioned. The second towards the left uterus which was preserved. Coagulation and section of the rudimentary horn's extremity allowing the individualisation of the left unilaterally formed uterus.

Results

One month after the operation the patient was free of symptoms of dysmenorrhea and three months later the patient was pregnant. Unfortunately she had a miscarriage at 7 weeks of pregnancy.

Conclusions

Rudimentary horn should be considered in the differential diagnosis of chronic pelvic pain in young women. Early diagnosis and horn resection prevents endometriosis formation, diminishes the symptoms of dysmenorrhea and increases the pregnancy rate. Although the pregnancy outcome of women with unicornuate uterus is poor, a successful pregnancy is possible. Vascularisation of the uterine remaining horn coming from the side of the rudimentary horn should always be considered and preserved.

<https://player.vimeo.com/video/269018697?autoplay=1>

ES27-0325 - Best Selected Videos 1

Wet lab ovarian cystectomy model; realistic training model in minimally invasive gynaecology

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Background

We are presenting a wet lab model of an ovarian cyst using pig's small intestine. This particular model was selected for its tissue properties that would give most adequate feedback when simulating laparoscopic ovarian cystectomy. The model accurately recreates dissection planes and the use of natural tissues accurately recreates tension needed for blunt dissection and cutting using laparoscopic instruments.

Methods

We are using pig's small intestine which is cleaned and trimmed on site into 5-6cm segments. Half of the segments are further filled with water and tied at both ends creating tubular cystic structures

These are further inserted into similarly sized segments of bowel re-creating the simulated ovarian cyst with its wall.

The specimen is then placed inside a laparoscopic training box, resting on another wet lab specimen, a rabbit, for a more realistic simulation of surrounding structures.

Results

The ovarian cystectomy model prompts learning of skills such as adequate tissue tension, use of laparoscopic scissors to incise and dissect cyst wall, removal of cyst intact through fine hand-eye coordination.

Tissue feedback is paramount, especially when cutting with laparoscopic scissors and using graspers for blunt dissection and this is best achieved using natural tissues such as small intestine.

"Shelling out" the cyst intact requires close hand eye coordination and using this model, the natural elasticity of tissues approaches real life situations.

Conclusions

Although there are limitations to wet lab animal models, they encourage excellent training of necessary skills important to minimally invasive gyn surgery.

The training models are easily reproducible, require little prior preparation and are an asset to intermediate gynaecological laparoscopic training.

<https://player.vimeo.com/video/269967945?autoplay=1>

**ES27-0047 -
Best Selected Videos 2**

Management of severe iliac vein injury during robotic-assisted pelvic lymphadenectomy

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Background

In this video, we introduce an incidence of severe iliac vein injury during robotic-assisted pelvic lymphadenectomy and radical hysterectomy.

Methods

It was a step by step demonstration of the surgical procedure. A 63 years old patient had the symptom of vaginal bleeding for 2 months. Invasive cervical papillary squamous cell carcinoma was diagnosed and the FIGO stage was IB1. Robotic assisted radical hysterectomy and pelvic lymphadenectomy were performed. The external and common iliac vein were injured by the uterine manipulator. To prevent thromboembolism, antithrombotic prophylaxis with low molecular weight heparin was administered during hospitalization.

Results

With the help of bulldog clamps, several lacerations were sutured by 4-0 polypropylene sutures. No blood transfusion was needed. As a result, no sign of thromboembolism or vascular occlusion was detected.

Conclusions

External and common iliac vein injury was rare and with high risk. Bleeding control and injury repair could be successfully achieved by the robotic surgical instruments. The operator who handled the uterine manipulator was significant and the experienced surgeons were recommended.

<https://player.vimeo.com/video/266675814?autoplay=1>

**ES27-0046 -
Best Selected Videos 2**

Combined laparoscopic and vaginal cervicovaginal reconstruction using acellular porcine small intestinal submucosa (SIS) graft in a patient with Mayer-Rokitansky-Küster-Hauser syndrome (U5aC4V4)

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Background

To introduce a creation that combines laparoscopic and Wharton-Sheares-George cervicovaginal reconstruction using SIS graft in a patient with Mayer-Rokitansky-Küster-Hauser (MRKH) syndrome who had a remnant uterus with functioning endometrium (U5aC4V4).

Methods

A 24-year-old patient had primary amenorrhea and irregular lower abdominal pain for 9 years. The patient was Tanner stage 3 for pubic hair and Tanner stage 4 for breast development. Physical examination revealed no vagina. A primordial uterus and a remnant uterus with functioning endometrium were detected by MRI. However, the remnant uterus had no hematometra. MRI also found left solitary kidney. Combined laparoscopic and Wharton-Sheares-George cervicovaginal reconstruction using SIS graft was performed. With the Wharton-Sheares-George neovaginoplasty, a vaginal mold with surrounding SIS graft was inserted into the newly created cavity. By laparoscopy, the level of the low pole of the uterine was incised by shape dissection. The proximal segment of the SIS graft to the lower uterine segment was sutured. A T-shaped IUD with a Foley catheter was fixed in the uterine cavity by the delay absorbed sutures to prevent the cervical or vaginal stenosis. The distal segment of the SIS graft was sutured with the high vaginal or vestibular mucosa vaginally.

Results

The operation was successfully completed. The operating time was 2 hours. Hospitalization was 4 days. There were no blood transfusion and complications. The patient had resumption of menses postoperatively.

Conclusions

Combined laparoscopic and Wharton-Sheares-George cervicovaginal reconstruction using SIS graft provided a minimally invasive, safe, and effective surgical option for the young patient with MRKH syndrome who had a remnant uterus with functioning endometrium. The technique is not complex and easy to learn and perform. And it provided a result with functional and anatomical satisfaction. No special surgical apparatus is needed.

<https://player.vimeo.com/video/266667251?autoplay=1>

ES27-0110 - Best Selected Videos 2

Retroperitoneal three-layer anatomy and dissectible layer for extraperitoneal endoscopic para-aortic lymphadenectomy (E-PAL).

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Background

For gynecologists who are not accustomed to retroperitoneal endoscopy, E-PAL is not a simple procedure. Thus, in this presentation, I show retroperitoneal layer anatomy and dissectible layer for E-PAL.

Methods

Dr. Tatsuo Sato, a well-known Japanese anatomist, proved that the renal fascia divides into three sub-fascial sheets: 1) the anterior sheet envelops the gonadal vessels and forms fascia, 2) the middle sheet wraps the ureter and continues to the fascia surrounding the urinary bladder; this sheet also includes the superior-hypogastric plexus and hypogastric nerve, 3) the posterior sheet envelops the abdominal aorta and the inferior vena cava and continues to include both the right and left common iliac and then internal and external iliac sheaths.

Results

To start with surgery, looking from the peritoneal cavity, the peritoneal membrane is tented by the EndoTip cannula, forceps are used for the blunt dissection of the retroperitoneal space, and CO₂ gas insufflation is carried out. Cranial dissection of the flank pad shows the left psoas major muscle and the left ovarian vessels (layer 1), with the left ureter (layer 2) and common iliac artery (layer 3) dorsal to these. This is the most important point: push the ureter up ventrally together with the ureteral fascia, and proceed into the posterior pararenal space on its dorsal side. The layer of loose connective tissue visible between the fat layers when traction is imposed is correct dissectible layer. Tracing this layer reveals the aorta and IVC, as well as the right common iliac vessels and the right ureter. Thus, dissection between layer 2) and layer 3) opens up an operating field with wide-ranging dissection both cranial and caudal in E-PAL.

Conclusions

Understanding of retroperitoneal three-layer anatomy is important for precise dissection for E-PAL. Dissection between layer 2) and layer 3) is necessary for safety approach to para-aortic region.

<https://player.vimeo.com/video/269484929?autoplay=1>

Laparoscopic extraperitoneal paraaortic lymphadenectomy followed by robotic pelvic surgery for endometrial cancer

Masaaki Andou¹, Kiyoshi Kanno¹, Shiori Yanai¹

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Background

To show minimally invasive techniques which combine laparoscopy and robotics for surgical staging in endometrial cancer.

Methods

From October 2013 to March 2018, 99 cases underwent combined robotic/laparoscopic staging for stage I to stage III endometrial cancer. All patients underwent a laparoscopic extraperitoneal paraaortic lymphadenectomy followed by a type II robotic radical hysterectomy with BSO and pelvic lymphadenectomy. During the extraperitoneal paraaortic dissection, we use 4 extraperitoneal ports along the left flank. As for the robotic pelvic approach, we use two additional transperitoneal ports in the left upper quadrant, aside from the camera port. As we reuse 2 of the left lateral trocars from the laparoscopic procedure in the robotic surgery, additional robotic ports are not required. The retroperitoneal approach in the paraaortic area makes it easier to maintain the operative field and potentially yield more lymph nodes. The robotic approach in the pelvis allows for precise and safe ureteral dissection.

Results

The operative duration was 289 minutes (PAND 114 minutes) and the estimated blood loss was 261mL (and 22.6mL for PAND). None of our cases experienced a conversion to laparotomy. Considering published evidence citing lymph node yield and our experience, we decided to utilize laparoscopic extraperitoneal retroperitoneal approach for thorough dissection of the paraaortic area rather than robotic dissection. As a result, the lymph node yield was high (paraaortic nodes- 55.3; pelvic nodes- 42.7).

Conclusions

The laparoscopic extraperitoneal approach and the robotic pelvic approach combined is advantageous for high BMI patients. This use of hybrid technique highlights the effectiveness of each approach in these patients. In our experience, the complication rate is lower with this combined approach.

<https://player.vimeo.com/video/269673789?autoplay=1>

Laparoscopic resected right obturator schwannoma as a mimic of an ovarian cyst: tumor enucleation.

Victor Gabriele¹, Lise Lecointre¹, Anne-Julie Carin¹, Aline Host¹, Olivier Garbin¹

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Background

The obturator nerve is an extremely rare location for schwannomas. In most of cases the diagnostic is not done preoperatively. Surgeons diagnose it during laparoscopy for adnexal or pelvic masses.

The aim of this study was to report the case of a laparoscopic conservative management for a undiagnosed right obturator nerve schwannoma presenting as an right adnexal mass.

Methods

A 45 years old patient, with no medical history, who presented with uterine myomas and 6 cm right adnexal mass.

The chief complain was pelvic pain. Ultrasound demonstrated a 6 cm soft-tissue nodule with a cystic component on the right ovary. IRM showed a heterogeneously right adnexal mass.

CA 125 was normal. These results did not suggested a retroperitoneal tumor.

We perform a laparoscopy. The exploration show a normal adnexa, with a pelvic mass developed in the paravesical fossa in touch with right external iliac vein an continue under corona mortis vein. The mass is well encapsulated and growing in the central part of the obturator nerve. The tumor capsule is incised through the nerve fiber, and the tumor content is enucleated. The right obturator nerve was left intact. The operative specimen is removed in a bag.

Then we perform a total laparoscopic hysterectomy without complication.

Results

Operative time was 156 minutes. Intraoperative blood loss was less than 20 mL. The operation was performed with no intraoperative complications. The patient was discharged on day 1. Any postoperative neurological disorder was report.

On histopathological examination, this case was diagnosed as a benign obturator nerve schwannoma.

Conclusions

Despite the fact that we realized a complete preoperative imaging for pelvic masse, the diagnostic of obturator nerve schwannoma was done per operatively.

A conservative surgery was perform with incision of tumor capsule and tumor enucleation.

Laparoscopic resection is a good treatment option.

<https://player.vimeo.com/video/270897512?autoplay=1>

**ES27-0394 -
Best Selected Videos 2**

Laparoscopic hysterectomy of a huge broad ligament fibroid

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²Ministry of Health, Gynecology, Mansoura, Egypt

³Elgalaa Teaching Hospital, Gynecology, Cairo, Egypt

Background

The only absolute contraindication for laparoscopic hysterectomy is large sized uterus in case of endometrial carcinoma. Otherwise, size of the uterus or adhesions are not contraindications. In this video we present a difficult case of a huge left broad ligament fibroid in a patient with many laparotomies before. The fibroid was 17 X 17 cm reaching the umbilicus with limited mobility. Preoperative preparation included bilateral ureteric catheters inserted by a urologist after induction of anesthesia before start of the procedure.

Methods

Entry was through Palmer's point due to large size of the uterus and suspected adhesions. Three ports : 5 mm left and right ports at the level of the umbilicus and 10 mm umbilical port. First , complete adhesionolysis using Ligasure 5 mm of the dense omental adhesions everywhere in the abdomen. The fibroid was gently and cautiously dissected from the leaves of the broad ligament after insertion of 10 mm myoma screw. After adequate dissection the left uterine artery was reached and coagulated. The right side was completed classically. The vaginal vault was cut using monopolar diathermy guided by the colpotomizer. The huge fibroid and uterus was cut into pieces using laparoscopic knife, all pieces were extracted through the vagina successively.

Results

The procedure was completed laparoscopically. Blood loss was about 900 cc. The total duration was about 150 minutes. The post operative course was uneventful. No intraoperative or postoperative complications occurred.

Conclusions

Laparoscopic hysterectomy in difficult cases like broad ligament fibroid is feasible when deep experience is present and adequate preoperative preparation is done.

<https://player.vimeo.com/video/272568341?autoplay=1>

**ES27-0342 -
Best Selected Videos 2**

Single-port laparoscopic myomectomy using In bag scalpel extraction for huge uterine myomas

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Background

Recently the use of electromechanical power morcellators has been discouraged owing to the potential for dissemination of occult uterine cancer. The purpose of this video presentation is to show that the transumbilical in-bag scalpel extraction is a feasible and safe alternative to the electromechanical morcellation even for huge uterine myomas.

Methods

We have performed single-port laparoscopic myomectomy and in-bag scalpel extraction through a 1.5- to 2.0-cm umbilical incision. We present huge myoma cases in this presentation. The myomas were cut in the bag with a knife and then extracted.

Results

There were no intraoperative complications, and no blood transfusion was required. The patients were discharged from the hospital with an uneventful postoperative period.

Conclusions

Even for huge uterine myomas, transumbilical in-bag manual extraction with a scalpel could be a feasible and safe alternative to the electromechanical morcellation to avoid the potential risk of spreading malignancy.

<https://player.vimeo.com/video/269993138?autoplay=1>

**ES27-0366 -
Best Selected Videos 2**

In bag morcellation using safety isolation bag

Aswath Kumar Reghunathan Nair¹

¹Jubilee Mission Medical College, Gynaecology, Thrissur, India

Background

Retrival of specimen using a modified endobag

Methods

Modified endobag is used to remove specimen after laproscopic myomectomy and TLH. Modifications are made so that it becomes easy for the surgeon.

Results

50 cases where done .30 cases of myomectomy and 20 cases of TLH.
Our bag was

- 1) Less time consuming
- 2) Easy to use
- 3) Less comlications

Conclusions

Safety isolation was an easy method to remove specimen without any spill in peritoneal cavity.

<https://player.vimeo.com/video/272272696?autoplay=1>

**ES27-0430 -
Best Selected Videos 2**

Laparoscopic, hysteroscopic and cystoscopic management of uncommon ectopic and eutopic pregnancies in malformed uterus: 3 clinical cases

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Background

Management of ectopic or frozen eutopic pregnancy in malformed uterus in every case is unique and can request all endoscopical routes for its successful treatment

Methods

laparoscopic, hysteroscopic and cystoscopic approaches were used to reveal 2 ectopic and 1 uncommon frozen eutopic pregnancy in patients with uterine malformations. 1st case is presented by 13 weeks of gestation ectopic pregnancy in rudimentary horn of class u4 subclass A hemi uterus with rudimentary communicating cavity according to eshre/esge classification of uterine malformations. The patient was admitted due to verification of pregnancy in a rudimentary horn without its rupture. Laparoscopic surgery was performed with excision of the uterine horn and its evacuation via 20 mm trocar, fetus was evacuated separately. Right sided hemi uterus can be seen. in 2 years the patient undergone cesarean section: no adhesions and any scar on a surface of hemi uterus was revealed. 2nd case presents a pregnancy attached to left tubal ostium in a patient with class u2 subclass a - partially septate uterus. during hysteroscopic evaluation left part of the cavity was significantly of greater value, unlike a right one, which was underdeveloped. the pregnancy was frozen. chorionic tissue was firmly attached to tubal ostium and surrounding endometrium. mechanical detachment was unsuccessful. we referred to resectoscopic detachment. second step septum resection was recommended in two months. the patient was lost of follow up. 3rd case is referred to iatrogenic malformation of uterus. the patient 7 years before undergone a c-section with suspicion to utero-bladder fistula formation in postoperative period. during cystoscopy we revealed a 14 weeks gestation dead fetus with detached umbilical cord and fully kept amnion. examination revealed no any pathology of ureteral orifices. on the posterior bladder wall a fistula into the uterus can be seen. Fetus was freely floating in liquid. subsequent laparotomy with subtotal hysterectomy, fistula excision and bladder pregnancy evacuation was then performed.

Results

all patients were treated successfully. one patient had a term delivery by cesarean section in 2 years after ectopic pregnancy.

Conclusions

high attention should be paid to patients with uterine malformation and pregnancy. early ultrasound pregnancy detection is recommended to exclude ectopic pregnancy in time.

<https://player.vimeo.com/video/272636449?autoplay=1>

**ES27-0396 -
Best Selected Videos 2**

Hysteroscopic excision of uterine adenomyosis

Duo Zhang¹, Jian Zhang¹

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Background

We have applied a novel hysteroscopic technique to treat adenomyosis successfully. A 38-year-old woman who had suffered progressive dysmenorrhea (Visual analogue scale score [VAS] score=8) and menorrhagia for more than 3 years visited our department. Considering that she can't tolerate the side effect of oral contraceptive pills and she has no desire of fertility, we performed hysteroscopic excision of adenomyotic lesions and we produce this video introduce the hysteroscopic technique.

Methods

Under ultrasound guidance, we use electric loop to cut endometrium and adenomyotic lesions.

Results

Follow-up was performed 2 times at 3-month interval. The patients menstruated regularly. The Visual analogue scale (VAS) score for dysmenorrhea is as low as 2.

Conclusions

This novel hysteroscopic technique is effective and feasible for adenomyosis.

<https://player.vimeo.com/video/272715527?autoplay=1>

ES27-0433 - Best Selected Videos 2

Laparoscopic radical hysterectomy in challenging situations

*Rocio Luna Guibourg¹, Cristina Soler Moreno², Pia Españo², Joan Duch Renom³,
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Background

The objective of the video is to show the laparoscopic approach to radical hysterectomy and sentinel lymph node mapping in a case with associated endometriosis.

Methods

This video illustrates the case of a patient who was referred to the Gynaecological Oncology unit with a stage IB1 cervical adenocarcinoma.

Physical exam reported no extracervical involvement.

PET scan was positive for hypermetabolic lymph nodes in left external iliac region.

It was decided to perform a sentinel lymph node study with Indocyanine green followed by pelvic lymphadenectomy and if negative for lymph node involvement, a radical hysterectomy

Results

Initial laparoscopic view evidenced an enlarged uterus due to myomatosis, and an associated endometriosis involving right adnexa and recto-vaginal septum.

Sentinel lymph node was detected with Indocyanine fluorescence and bilateral pelvic lymphadenectomy was completed to send for intraoperative study, which was negative for lymph node involvement.

C1 radical hysterectomy was performed as described by Querleu-Morrow. In this particular case, retroperitoneal space dissection and latero-medial approach to recto-vaginal space is crucial to deal with the associated endometriosis.

Final pathologic study reported tumour free margins, 0/24 affected lymph nodes in right pelvic lymphadenectomy, and 0/22 affected lymph nodes in left pelvic lymphadenectomy.

Conclusions

Radical hysterectomy is a feasible procedure. In case of associated pathology such as deep endometriosis, retroperitoneal spaces and landmarks can be of particular help.

PET-scan false positive lymph nodes in cervical cancer are possible. Pathologic exam of the lymph nodes is crucial to avoid side effects of complementary therapies.

<https://player.vimeo.com/video/272985377?autoplay=1>

Free communications 1

ES27-0240

Free communications 1 | Oncology | Hysteroscopy | Laparoscopy | Urogynaecology

Clinical pathological analysis of 7 cases of synchronous mucinous metaplasia and neoplasia of the female genital tract and paper review

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Background

Synchronous mucinous metaplasia and neoplasia of the female genital tract (SMMN-FGT) involving the uterine cervix and corpus, fallopian tubes and/or ovaries rarely occur, these tumors clearly originated in each site because in situ components could be demonstrated in each area. This type of mucinous lesion, demonstrates a spectrum of morphological features ranging from metaplasia, with no nuclear or architectural abnormalities, to invasive mucinous adenocarcinoma.

Methods

Clinical data of 7 patients with SMMN-FGT at Department of Gynecology, the Obstetrics and Gynecology Hospital of Fudan University, between Jan 2014 and Dec 2017, were collected for retrospectively analysis with 6-43 months follow-up. The clinicopathological characteristics, surgical treatment, prognosis were analysed. A review of the literature on SMMN-FGT with prognosis information (13 cases) was provided.

Results

Median age at diagnosis was 49 years (range, 33-70 years). Abnormal vaginal discharge and/or vaginal bleeding were the most common presenting symptoms. 3 (42.9%) of these patients were under 40 years old. 2 patients who under 40 years old without invasive disease on pathological examination had preserved their ovarian function, and now alive without disease with 6 and 25 months follow-up respectively. Pathological examination revealed malignant lesions among 4 patient, and one of them died of disease postoperation. A summary of the case reports and case series of SMMN-FGT with follow-up information in the literature was reviewed. There are 13 reports of SMMN-FGT in women ages 39-83 years. Among those patients, 8 had invasive disease, with a survival rate of 50% at 6-102 months follow-up. There were no evidence of malignant disease in the rest 5 patients. The rate of ovarian involvement was 60% (3/5). There were no disease recurrence or progression after hysterectomy and bilateral salpingo-oophorectomy.

Conclusions

SMMN-FGT in young patients without invasive disease could be treated conservatively with preserving ovarian function and close surveillance at the premise that ovarian biopsy confirmed no lesion involved.

TruClear 5C treatment of large endometrial polyps in an office setting: acceptability and feasibility

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Background

Various techniques have been described to remove endometrial polyps, generally the method of choice is the one in which the clinician is trained and most familiar. Systematic review and meta-analysis showed that women treated with Hysteroscopic Tissue Removal system (HTRs) for endometrial polyps have a shorter procedure time than those treated with loop or bipolar electrode resection in an operating room or in office setting.

The present study was carried out to evaluate feasibility, effectiveness, and tolerability of a small diameter HTRs (TruClear 5C) in removing polyps of any size and location into uterine cavity in an office setting with vaginoscopic approach.

Methods

146 women with a single >10 mm polyp were considered for polypectomy between April 2016 and May 2017. 65 of these patients had a polyp size ≥ 20 mm. All the procedures were carried out using a small size HTRs (TruClear 5C system Medtronic, Dublin, Ireland) in an office setting with vaginoscopic approach. Before beginning the procedure, to reduce the scope diameter to 5 mm, we removed the outer sheath and to avoid cavity collapse we performed the window-lock procedure. For all procedures, time was taken from the beginning of the polypectomy to the complete removal of the pathology. Any complications and vasovagal reactions were recorded. Pain intensity experienced during the procedure by the women was evaluated immediately after the polypectomy using a 10-point Visual Analog Scale. All women with a successfully completed procedure underwent an ultrasound evaluation at 3 to 5 months post procedure. The women were asked then to assess their level of satisfaction (very satisfied, fairly satisfied or not satisfied). This study was approved by the local Institutional Review Board and Institutional Health Technology Assessment.

Results

Success of office procedures was 97.2%. Polyps <20 mm were completely removed in 79/81 cases (97.5%). The completeness of ≥ 20 mm polyp removal was achieved in 63/65 cases (96.9%). The median time to complete the polypectomy was 4.23 ± 1.05 minutes for polyps <20 mm and 5.03 ± 1.34 minutes for polyps ≥ 20 mm respectively. Pain was minimal and brief with no significant difference between the two groups. In 4/81 (4.34%) cases with polyps <20 mm and in 4/65 (6.15%) cases with polyps ≥ 20 mm women reported moderate pain. There were no serious adverse events for both groups. At 3-5 month follow up, in 3 out of 142 women recurrence of endometrial polyps were reported by ultrasound.

Conclusions

Our data show that women treated with small diameter HTRs had short surgical procedure time even for polyps larger than 20 mm and the procedure was likely to completely remove polyps of any size without any patient discomfort. Hysteroscopic treatment of ≥ 20 mm polyp with Truclear 5C was feasible and well tolerated in an office setting.

Laparoscopic management and analysis of the risk factors for the overall survival in patients with endometrial cancer

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Background

To evaluate the influence of the risk factors on the survival in patients treated for endometrial cancer (EC) and to compare the laparoscopic and open approach.

Methods

Retrospective review. Staging surgery/debulking was performed in 169 patients between April 2008 and April 2018. A total hysterectomy and double salpingo-oophorectomy was performed with sentinel node in 12 cases, with pelvic lymphadenectomy in 69 cases and with pelvic and para-aortic lymphadenectomy in 52 cases. A laparoscopic technique was performed in 101 patients. Pelvic exenteration was performed in 2 cases. 90 patients received adjuvant treatment with chemo-radiotherapy. The factors that affect survival were assessed using Kaplan-Meier survival curves and a multivariate analysis.

Mean age was 64.3 years. Mean Surgical time was 195.2 minutes, and mean blood loss was 1132 ml. Mean removed nodes was 20 pelvic nodes (10-55) and 18.1 para-aortic nodes (7-51). We present in video format a extraperitoneal laparoscopic paraaortic lymphadenectomy, omentectomy, pelvic lymphadenectomy and hysterectomy with double salpingo-oophorectomy, step by step.

Results

The global survival of the studied group was 94.5% at 3 years and 93.1% at 5 years. There were significant differences according to myometrial infiltration (95.2% vs. 84.9% at 3 years, 93.8% vs. 68.6% at 5 years; log rank $p=0,034$), FIGO stage (Log rank $p=0,000$) and preoperative Ca125 levels (89.4% vs. 53.2% when Ca125 > 35; log rank 0,030). There weren't significant differences on the survival depending on the surgical technique (LPS vs LPM) ($p=0,727$), histological differentiation degree ($p=0.180$), tumor size ($p=0,271$), infiltration lymphovascular ($p=0,140$), positive nodes ($p=0,436$) and histological type ($p=0,083$).

Conclusions

In this serie the risk factors in the overall survival of patients with EC, was the stage at diagnosis, preoperative Ca125 levels and myometrial infiltration.

Predicting pre-malignant and malignant endometrial polyps by clinical and hysteroscopic features

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Background

The objective of this study is to investigate whether hysteroscopic features can contribute to the diagnosis of malignancy in endometrial polyps.

Methods

Retrospective review of all women who underwent operative hysteroscopy with resection or biopsy of endometrial polyps from January 2012 to September 2017. Their medical records were reviewed and information on medical, surgical and obstetrical history, and hysteroscopic findings (including number and size of polyps and vascular appearance of the polyps) were abstracted. These parameters were analyzed according to the polyps' pathology.

Results

557 women were included in the study. Their mean age was 55.3 ± 12.2 years, their mean parity was 2 (range, 0-11) and 316 (56.9%) were menopausal. Endometrial carcinoma was found in 26 (4.7%) cases, while endometrial hyperplasia was found in 5 (0.9%) cases. Endometrial carcinoma or hyperplasia were significantly associated with patients' age ($p < 0.01$) and menopausal status ($p < 0.01$). In addition, the hysteroscopic findings of vascular appearance of the polyp and the presence of 3 or more endometrial polyps were significantly associated with malignant or pre-malignant pathology ($p < 0.01$). However, the size of the largest polyp was not associated with malignant or pre-malignant pathology.

Conclusions

Hysteroscopic findings of endometrial polyp vascularity and numerous endometrial polyps may contribute to the diagnosis of endometrial carcinoma or hyperplasia, in addition to demographic parameters such as age and menopausal status.

Immune activation status as predictive marker for cervical cancer

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Background

Progress in the understanding of the interplay between the immune system and cancer has highlighted the importance of immune activation in the elimination of cancer cells. Immune activation in response to cancer development is the prime denominator for successful disease remission.

Recent data has shown that immune infiltration is a stronger predictor for clinical outcome, than previously used classification based on histology and tumor invasion. Data shows that activation of anti-cancer immune reactivity potentially through therapeutic intervention significantly reduces the risk of metastases development in many cancer types. Although this relationship between the immune system and malignant tumors is likely to be the case in virus induced-cancers as well (such as HPV related cancers), such an association has so far not been documented.

Aim of the proposed study

We will perform analyses of immune infiltration and explore the impact of the specific T-cell recognition of virus-derived proteins as denominators for successful clearance of early disease.

In addition, we will take advantage of a novel technology, which we have developed for mapping of T-cell epitopes and efficient multiplex T-cell detection via DNA barcode labeled MHC multimers. This technique has the ability to characterize immune recognition developed specifically towards HPV-components important for cancer development. This will help us characterize an immune signature in those patients with significant cervical intraepithelial neoplasia (CIN 3) and cancer. Thereby hopefully facilitate identification of which critical immunological parameters that correlate to disease elimination.

Methods

Analyses will be performed on cervical cytology (PapSmear), blood samples and cervical biopsies from the following:

- 40 healthy controls
- 40 patients with severe cervical dysplasia (CIN 3)
- 40 patients with cervical cancer

All biopsies and blood samples will be subjected to mild enzymatic digest (Collagenase IV) in order to achieve a single cell suspension to purify and cryopreserve lymphocytes.

Based on our recent technology we will use DNA-barcode labelled MHC multimers to make it possible to analyze the specific types of immune infiltrating cells and the impact on the virus-derived proteins these cells have, in order to assess the actual antigen-responsive T-cell reactivity towards HPV infection. These T-cells will be characterized by flow cytometry analyses.

We have predicted peptides (by using online servers IEDB.org, netMHCpan 4.0) that might be that specific sequence “the epitopes” from the proteins E2, E6 and E7 in HPV virus. Those peptide sequences (overlapping) are likely to be recognized by the T-cells. This makes it possible to fully characterize which peptides the T-cell will recognize both systemically (blood) and locally (tumor/pre neoplastic tissue). Such T-cell recognition profiling will be a major advantage in determining the immunological fingerprint associated with favorable disease outcome, and may serve as a biomarker for therapeutically induced immune activation.

Results

The project is still undergoing

Training with a robotized needle holder for conventional laparoscopy: evaluation in intracorporeal suturing skill performances

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Background

Laparoscopic suturing generates technical and ergonomic difficulties due to the limited degree of freedom of forceps. To reduce this limitation, articulated robotized needle holders (RNH) have been developed. The impact of training with this new generation of devices is largely unexplored. This study compared suturing skills of novices who trained using a RNH holder to those using conventional needle holders (NH) on a box trainer. Post training performances in difficult ergonomic conditions were additionally studied.

Methods

Twenty medical students initially trained on a peg transfer task from the Fundamentals of laparoscopic surgery (FLS) curriculum for 2 sessions and baseline intracorporeal suturing skills were evaluated. Participants were then randomized in group A (n=10) using a RNH (Jaimy*, Endocontrol) and group B using RHs (n=10). Both groups performed 4 training sessions of 10 consecutive intracorporeal knots. No assistance was provided during hands-on training. Post training evaluation included intracorporeal FLS suture and simple interrupted suture in difficult ergonomic conditions. The assessment tools employed were standardized FLS metrics and a quantitative and qualitative score for suture in difficult ergonomic conditions (0-32). Workload was measured with the Task Load Index (NASA-TLX)(0-120). Outcomes were compared between the two groups using the Mann-Whitney U test.

Results

Median age of participants was 23.7 years (range 18-32). All participants completed the study within a period of 2 months. Intracorporeal suture FLS scores were not statistically different between group A and group B at baseline (281 vs 172; p=0.143) and during post-training evaluation (468 vs 474.5; p=0.762). Regarding suture in difficult ergonomic conditions, group A obtained better performance scores than group B (15.7 vs 3.7; p=0.006). NASA-TLX scores were not different between group A and group B for baseline intracorporeal FLS suture (74.5 vs 75.5; p<0.911), post-training intracorporeal FLS suture (62.5 vs 58; p<0.858) and suture in difficult ergonomic conditions (78.5 vs 79.5, p<0.909).

Conclusions

This study demonstrated that a RNH, used at the beginning of novices' learning curve, allows to achieve a similar level of performance than conventional NHs on a FLS intracorporeal suturing task. Furthermore, it appears to provide to trainees a solution to counterbalance impaired operative ergonomics.

Incidence of unexpected endometrial carcinoma in pre- and post-menopausal women undergoing hysteroscopic polypectomy

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Background

To evaluate the incidence of unexpected endometrial carcinoma diagnosed after hysteroscopic resection of macroscopically benign polyps, and its association with menopausal status.

Methods

A retrospective case series study including all the hysteroscopies and polypectomies performed in Hospital Universitario Príncipe de Asturias between January 2011 and December 2017. Data were obtained from a registry that included clinical records, hysteroscopic reports, resection technique and histopathologic results.

Results

In this period of time 4809 hysteroscopies were performed. 1670 macroscopically benign polyps were described, performing excision in 1439 (86,1%) of them. 900 (62,5%) were resected with scissors, 273 (19%) with versapoint bipolar electrode and 266 (18,5%) with morcellator. Almost half of this patients (47,7%) were post-menopausal women. An histopathological diagnosis of endometrial adenocarcinoma was obtained in 17 patients (1,2% of all macroscopically benign polyps excise), being this result consistent with prior literature. All but one of these patients with diagnose of unexpected carcinoma were post-menopausal (94,1%), being the relation between endometrial adenocarcinoma in macroscopically benign polyps and post-menopausal status statistically significant. The mean age of patients with carcinoma was 59,7, and post-menopausal bleeding was the most frequent reason for consultation (64,7%).

Conclusions

Histopathological examination of excised polyps is of key importance especially in post-menopausal patients who have a higher risk of malignancy.

Endometrial scratching of thin endometrium in IVF and IVF with donor oocytes – clinical outcomes

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Background

Clinical outcome of IVF depends on the embryo's implantation and receptivity of endometrium. Many experts consider an important parameter of the receptivity of the endometrium to its thickness in the preovulatory period. But what kind of the thickness of the endometrium worsens the outcomes of IVF programs the subject of discussions.

The aim of our study was to improve clinical outcomes of IVF and IVF-DO programs in patients with thin endometrium using endometrial scratching.

Methods

We analyzed meeting of the thin endometrium in 2573 women who treatment in the IVF program. We appreciated pregnancy rates (PR) and early reproductive losses associated with endometrial thickness in patients who used and did not use the extra estrogen support or screeching of endometrium(n=273).

The effectiveness of scratching of the endometrium was assessed depending on the timing of the procedure (n=126).

The same study was in the IVF program with donor oocytes(n=95).

Results

Our study showed that PR depends on the degree of endometrium tickness. And using extra estrogens does not improve clinical outcomes of IVF.

So, when endometrium less than 5mm (Extremely thin endometrium) PR was 10%, used and did not use the extra estrogen. In group with endometrium 5-7mm (Mildly thin endometrium) PR was the same tat control group (endometrium >7mm) and was 40%. Early reproductive loss in group with Extremely thin endometrium was 50% against 9,6% in the control group. The same results was in IVF with donor oocytes. PR in patients with endometrial less than 5 mm was 11,1%, with endometrium 5-7 mm was 38,9%, and in control group 45,8%. Early reproductive loss was 100%, 28,6% and 15,6% respectively.

Endometrium screatching on the day 8th of stimulated cycle in patients with extremely thin endometrium increased PR to 27%. The use of screatching on the day 8th and 22d of natural cycle, prior to IVF does not improve PR and it was 7% and 9%. Early reproductive loss when performing the procedure on the day 8th of stimulated cycle was 27,3%, on the day 8thof natural cycle prior to IVF 50%, on the day 22d of natural cycle prior to IVF 66,7%

Conclusions

Extremely thin endometrium reduces PR and increases early reproductive losses
Endometrial scratching on the 8th day of stimulated cycle in women with extremely thin endometrium significantly increases pregnancy rate and lowers the frequency of early reproductive loss. Additional use of estrogen in patients with thin endometrium does not increase its thickness and does not improve clinical outcomes of IVF.

Tailoring of the Hysteroscopic Uterine Septum Incision according to the uterine fundal myometrial thickness

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Background

Uterine septum is the most common type of uterine anomaly and is encountered more frequently in patients with infertility or repeated pregnancy loss . The fundal myometrial thickness (FMT) is measured as the distance between the outer border of the fundus and an imaginary line passing between the two tubal orifices. Studies have shown FMT measurements to range between 6 and 18 mm with a mean value of 11mm.

To demonstrate how the depth of the intrauterine septum can be measured indirectly during hysteroscopic septum resection and the length of the septum to be incised can be determined according to the fundal myometrial thickness of the patient.

Methods

During hysteroscopic septum resection it is classically recommended to incise the septum down to the level of the two tubal orifices. If the same classical technique of septum resection is applied to all patients, some patient's remaining total myometrial thickness following the operation will be lower than 11 mm. Although rare, uterine rupture may occur during pregnancy in patients with a history of uterine septum surgery.

A 24 year old Gravida 2 Parite 0 Abortus 2 patient underwent hysteroscopy under general anesthesia. Her FMT was measured as 7mm prior to surgery. Hysteroscopy was performed using resectoscope with a straight loop and a 0 degree optical camera.

Results

A broad based partial uterine septum was visualized. Before the resection of the uterine septum, various lengths involving the loop of the resectoscope were determined preoperatively as reference points. The distance from the tip of the loop to the starting point of the yellow isolation band was measured as 4mm. The distance from the tip of the loop until the end point of the yellow isolation band was 11mm. The tubal orifices were used as reference points and the septum was incised on the midline until 4mm of septum was remaining. Since the FMT was measured preoperatively to be 7mm, the remaining uterine wall thickness was 11mm. With indirect measurements of the depth of the residual uterine septum, overthinning of the uterine fundal myometrial wall is believed to be prevented.

Conclusions

Determining the amount of uterine septum that needs to be resected according to the fundal myometrial thickness measurement prior to surgery may help to decrease the risk of uterine rupture during pregnancy.

Single-hole laparoscopic retroperitoneal para-aortic lymphadenectomy: about 3 consecutive cases

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Background

To explore the para-aortic lymphadenectomy feasibility and safety via a single laparoscopic retroperitoneal approach in cervical cancer surgery.

Methods

From February 2018 to April 2018, three patients diagnosed as cervical cancer underwent single-hole laparoscopic retroperitoneal para-aortic lymphadenectomy. The patients were selected to record Body Mass Index(BMI), operative time, intraoperative blood loss, the number of para-aortic lymph node and positive lymph nodes, abdominal drainage tubes removal time, postoperative bowel function recovery time, total hospital stay time and perioperative complications, retrospectively.

Results

All the 3 cases were successfully operated without conversion to laparotomy or conventional laparoscopy. The BMI (kg/m²) were 20.4, 22.9 and 23.4; The operative time (min) was 140.6, 193.5 and 128.3; The intraoperative blood loss (ml) was 121, 109 and 95; The number of para-aortic lymph node dissections was 8, 13 and 15. All postoperative lymph node biopsy results were negative; The abdominal drainage tubes removal time was from 3 to 6 days after surgery; The bowel function was recovered from 3 to 5 days after surgery; The total hospital stay time was from 7 to 13 days. No serious perioperative complications occurred.

Conclusions

Single-site laparoscopic retroperitoneal para-aortic lymphadenectomy is feasible for cervical cancer treatment, however, due to limited cases, the safety needs further postoperative follow-up and more data to evaluate.

Laparoscopic nerve sparing radical hysterectomy and lymphadenectomy in patients with cervical cancer

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Background

Survival of patients with cervical cancer stage IB - IIA is highly variable and is affected by multiple risk factors, such as tumor size and lymph node metastases. We evaluated the outcome after surgical treatment and survival of patients who underwent laparoscopic radical hysterectomy and pelvic and para - aortic lymphadenectomy.

Methods

In time period of 1/2011 to 02/2018 54 patients with cervical cancer stage IB - IIA underwent laparoscopic radical hysterectomy and pelvic and para - aortic at St. Luke's hospital in Thessaloniki, Greece and at Mother and Child Medical Centre in Nikosia, Cyprus. Preoperatively all patients had undergone clinical staging and MRI for the evaluation of lymph node status.

Results

44 patients with stage IB and 10 patients with stage IIA disease underwent laparoscopic radical nerve sparing radical hysterectomy and pelvic and para - aortic lymphadenectomy. The average number of lymph nodes was: pelvic 19 (15 - 28) and para - aortic 18.2 (15 - 25) and the average tumor size 5.25 cm (4.5 - 8). No patient had any major complication and the mean blood loss was 172 ml (100 - 300 ml). Patients were mobilized the first postoperative day and the catheter was removed on the third postoperative day with residual urine volume less than 50 ml. The mean follow-up is 48 months (3-86). The recurrence rate was 7,4 % (4 pts) and the mortality rate was 3,7 % (two patients die after local recurrence and distance metastasis) .

Conclusions

Laparoscopic nerve sparing radical Hysterectomy with pelvic and paraortic lymphadenectomy is feasible and safe in patients with cervical cancer St. IB - IIA. It offers oncological safety and the advantages of laparoscopy and nerve sparing technique. Furthermore the patients are able to receive adjuvant therapy directly without losing valuable time in postoperative recuperation.

Free Communications 2

ES27-0085

Free communications 2 | Niche | Fibroids | Laparoscopy

Subjective validation of pregnancy sheep model to resolve amniotic band constriction in a fetoscopy course

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Background

Amniotic band constriction is a congenital disorder caused by entrapment of fetal parts (usually a limb or digits) in fibrous amniotic bands while in utero. The objective was to subjectively validate the pregnant sheep as an experimental model for the resolution of constrictive amniotic band training in fetoscopic surgery.

Methods

Once the course was accredited by the Ethical Committee of animal experimentation Merina 90 days pregnant sheep (average weight 50-60 kg) were used. Data included in the present study was obtained from 8 consecutive editions of our *Training Course on Fetoscopy and Updates of Fetal Surgery from 2012 to 2017*. The participants are trained to perform a model of amniotic band in the fetal lamb and its posterior resolution by fetoscopy. At the end of the course, attendees subjectively assessed a total of 6 questions in terms of the animal model used. They also globally rated the usefulness of the pregnant sheep model on a 1-10 points scale.

Results

A high/very high score was obtained on evaluation fulfilled by the attendants about the different features and techniques of the program (>3 of 5 points). In a more comprehensive way, the pregnant sheep was very positively ranked (9.61 ± 0.51 points) as an animal model.

Conclusions

The pregnant sheep and fetal lamb used as an animal training model showed a high subjective validity. Further objective validation studies should be carried out to be definitely considered as a useful model for the practice in fetoscopy training programs prior to human clinical application.

A case series of caesarean section scar and cervical ectopic pregnancies between 2015-2017

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Background

Cervical ectopic pregnancy (CEP) and caesarean scar ectopic pregnancies (CSEP) are rare yet they are associated with significant morbidity and mortality. Their incidence is rising – in the case of CSEP possibly due to increased number of caesarean sections performed. Additionally this rise in detection may be confounded by the increased utilisation of ultrasound examinations in early pregnancy. To date there is no consensus on the optimal management of these pregnancies.

Methods

This is a retrospective observational study from January 2015 until December 2017. Cases were identified using the ICD coding from our hospital records and then clinical and operative notes were reviewed.

Results

Four cases CEPs and two cases CSEPs were found. Mean age of patients was 36 years (range 26-41), mean gravidity was 3 (range 1-5) and mean parity was 1,3 (range 0-3). All patients had a risk factor associated with their respective ectopic pregnancy. In the case of the CEPs three (75%) had at least one previous D&C and one (25%) underwent insemination. Patients with CSEP had at least two previous caesarean sections. All patients presented typically with vaginal bleeding. Five patients (83%) were treated with hysteroscopic resection alone. In this group four had a CEP and one a CSEP. A 12 degree operative hysteroscope using monopolar energy with Sorbitol/Mannitol solution was used for all these patients following diagnostic hysteroscopy under NaCl 0,9% insufflation. There were no intraoperative complications for any patient. Mean gestational age in this group was 6 weeks (range 5-8). Mean haemoglobin drop was 0,98 mg/dL (range 0,1-1,5 mg/dL). Patients were discharged on the first or second post operative day and required no further hospital care.

The remaining one case presented at 11 weeks gestation with a live CSEP bleeding heavily. Initial diagnostic hysteroscopy was performed. The proximity to the bladder and the significant size of the pregnancy led to switching to laparoscopic injection of potassium chloride into the gestational sac with subsequent systemic Methotrexate administration of a total of four doses of 1 mg/kg in conjunction with folinic acid. Haemoglobin drop was 2,0 mg/dL. Hospital stay was four days. Follow up occurred over three months. After three months the β -HCG was zero. On ultrasound the pregnancy had completely resolved.

Conclusions

To our knowledge this is the largest case series of CEP and CSEP where five patients received hysteroscopic resection alone without administration of any vasoconstrictive agents. No further systemic medical treatment or interventional radiology measures were required. We believe that hysteroscopic resection alone is safe and sufficient when performed by an experienced surgeon in the hospital setting. However, as the more advanced case of CSEP illustrated, flexibility in combining medical and surgical treatment must be guided by the clinical scenario and potential risk to the patient.

Robot-assisted laparoscopic uterine reconstruction of a rudimentary horn with a unicornuate uterus

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Background

To demonstrate a novel technique of robot-assisted laparoscopic uterine reconstruction of a rudimentary horn with a unicornuate uterus in a 13-year-old girl.

Methods

A 13-year-old girl with a non-communicating uterine rudimentary horn.

The patient had her first menstruation at 11 years old with progressive severe dysmenorrhea. Ultrasonography showed a duplication of the uterus which called an accessory and cavitated uterine mass, a left ovarian cyst and some pelvic liquid. Medical treatment was initiated with traditional Chinese medicine. Magnetic resonance imaging showed a left noncommunicating rudimentary horn (5.3×2.5×4.5cm) with a unicornuate uterus (3.1×3.0×2.2cm), a left ovarian cyst (12.5×11.0×9.1cm) and together with lack of left kidney. A primary gynecological examination showed a single cervix without vaginal malformation. After serious evaluation, we decided to perform a robot-assisted laparoscopic left ovarian cystectomy and uterine reconstruction. The surgery was conducted with a da Vinci system (Intuitive Surgical Inc., Sunnyvale, CA, USA). Five trocars were applied as follows: one 12-mm camera trocar, two 8-mm ancillary robotic trocars placed bilaterally (approximately 8-10 cm away from the camera port and 30 degrees below it to avoid the collisions between the robotic arms), and two 5-mm assistant trocars. After conventional left ovarian cystectomy, the left broad ligament was fenestrated and round ligament of left rudimentary horn was resected to in order to push the rudimentary horn closer to the unicornuate uterus. The two uterus were incised medially until into their cavity. Suturing the corresponding margins together, and uterine reconstruction was completed with enlarged cavity.

Results

Following three months of gonadotrophin-releasing hormone (GnRH) analogue therapy, the patient reported regular menstrual cycles, without dysmenorrhoea.

Conclusions

A novel uterine reconstruction without removal of the uterine rudimentary horn is feasible with satisfactory.

<https://player.vimeo.com/video/269882078?autoplay=1>

ES27-0358

Free communications 2 | Niche | Fibroids | Laparoscopy

Case report: laparoscopic excision of a symptomatic caesarean section scar niche.

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Background

A niche is a defect within the lower segment of the uterus following improper healing following caesarean section. This complication is likely to be seen more commonly as a consequence of high rates of caesarean section deliveries. Symptoms associated with the presence of a niche includes pain and irregular bleeding. Niche repairs can be performed laparoscopically or hysteroscopically.

Methods

Case:

34 year old lady with a history of 2 caesarean sections presented with pelvic pain, dysmenorrhea, and loss of brown discharge following menstruation. Ultrasound showed a 18mm spherical cystic area in the caesarean section scar.

The video demonstrates laparoscopic excision, drainage, and closure of a cystic area associated with the niche at the site of the caesarean section scar. A hysteroscopy was performed initially, and the defect was highlighted by trans-illumination. The uterovesical fold was opened and the bladder deflected away. The niche was identified and incised, and clear fluid was seen draining from the cystic area. The defect was closed by laparoscopic suturing.

At one month, the patient reports a significant improvement in her symptoms post-operatively.

Conclusions

A laparoscopic approach for the management of a symptomatic niche can be safe and effective. The associated gynaecological symptoms can impact quality of life significantly, and there is an association with greater risk of obstetric complications including scar dehiscence, abnormal placentation, and scar ectopic pregnancy. The gynaecologist should therefore be alert to the possible presence of a niche, and could consider laparoscopic repair as the procedure of choice.

<https://player.vimeo.com/video/271958292?autoplay=1>

Pregnancy in scar is an abnormal intrauterine pregnancy rather than extra uterine pregnancy

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Background

Cesarean scar pregnancy (CSP) is a rare form of an ectopic pregnancy (EUP). Due to an objective measurement one can raise a question whether a CSP is a real EUP or an abnormal form of intrauterine pregnancy

Methods

A retrospective study in which we compared CSP pregnancy to tubal EUP in a ratio of 1:2 between the years 2015-2017. Data collected from the medical record

Results

10 patients which were treated for CSP were compared with 20 patients diagnosed with EUP. There was no difference in GA at diagnosis. The CSP group had a significantly thicker endometrium, mean 14.3 mm vs.8.3 mm in the EUP group ($p=0.002$). β hCG level were significantly higher in CSP compared with the EUP group ($p=0.002$). EUP group were significantly younger ($p=0.029$), and had lower parity ($p=0.038$) than CSP group. In the EUP group 20% had previous EUP compared with none in the CSP group.

Conclusions

β hCG level and endometrial thickening parameters in CSP patients are highly different from EUP patients. This finding suggest similarity between CSP patients to patients with normal intrauterine pregnancy

A multimodal approach to the surgical management of a 34 week sized fibroid uterus

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Background

A 34 year old nulligravid woman desiring fertility preservation referred with worsening symptoms of heavy bleeding, urinary frequency, and pelvic heaviness. A 34 week sized multiple fibroid uterus was confirmed with ultrasound and MRI. A preoperative MRI was completed to aid in surgical planning. It showed multiple fibroids, the largest measuring 17.4 x 11.1 x 18.1cm (FIGO type 7), it was connected to the fundus by a 7 x 13cm stalk.

Methods

A conservative, multimodal approach of laparoscopy, hysteroscopy, and radiofrequency ablation with post-operative medical management is demonstrated. A total of six fibroids were resected laparoscopically, one hysteroscopically, and five were treated with Acessa®. A vessel sealing device was used to amputate three type 7 fibroids following transabdominal injection of a dilute vasopressin solution. Three FIGO type 4 fibroids were encountered deep to the stalk of the large fundal fibroid and were resected using monopolar energy and blunt dissection. This incision was closed with suture in three layers. Laparoscopic volumetric radiofrequency ablation (Acessa®) was then used to treat five FIGO type 4 fibroids located in the posterior lower uterine segment. The Acessa® procedure was utilized in order to reduce uterine trauma given the patient's desire for fertility. A single 5 cm FIGO type 0 fibroid was resected from the uterine cavity using a hysteroscopic tissue removal system (MyoSure XL®).

Results

The patient was given a three month course of ulipristal acetate following the surgery and was symptom-free at a six week follow-up. MR imaging completed 6 weeks post-operatively showed a large reduction in the overall size of the remaining fibroids treated with radiofrequency ablation and ulipristal

Conclusions

This video shows the importance of individualizing surgical approach and using a multimodal approach based on a patient's fertility desires, symptoms, and location and size of fibroids.

<https://player.vimeo.com/video/269119413?autoplay=1>

Management of cesarean scar pregnancy: a retrospective study

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Background

Management of cesarean scar pregnancy is not consensual. There is many options described mainly in cases report or cases series and in recent litterature review. However, number of cases are always scarce and evaluation of subsequent fertility is often missing. Subsequent fertility is the main goal for these women.

The objectives of the management of cesarean scar pregnancies is an effective management avoiding massive haemorrhage, uterine rupture and allowing conservative management to make possible subsequent pregnancies.

Aim of this study is to report diagnosis and standardized management of cesarean scar pregnancy and to evaluate subsequent fertility

Methods

This retrospective study took place in the gynecologic department of a teaching hospital between 2010 and 2015. It includes 21 consecutive women with a cesarean scar pregnancy. A medical management was preferred anytime when possible. The type of management was evaluated such as recovery time and subsequent fertility.

Results

Nineteen women (81%) were managed medically with in situ 1mg/kg methotrexate injection on day 0 followed by an intramuscular 1mg/kg methotrexate injection on day 2. Sixteen of them had also 600mg of Mifepristone because of a progesterone rate higher than 9ng/ml. The two others had a surgical management by hysteroscopy. Two women out of twenty one had hard bleeding complications managed by embolisation for one and laparotomic internal iliac ligation and scar suture for another. One septic complication occurred following the management of cesarean scar pregnancy. The mean recovery time was 56.95 days (8 weeks of gestation). Fourteen women had operative hysteroscopy for retained product of conception 18 weeks after medical management.

Five women with a pregnancy desire were pregnant in a mean time of 18 months after management of cesarean scar pregnancy. No recurrence of cesarean scar pregnancy was reported.

Conclusions

Medical management by the described protocol seems safe and efficient, leading to intrauterine pregnancy for all the women who still want to conceive.

Time interval between myomectomy and conception: a case series reviewing obstetric outcome

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Background

Myomectomy is frequently performed to preserve or enhance fertility. Both laparoscopic and open approaches are well established surgical techniques. Various studies have looked into the outcome of myomectomy in terms of fibroid characteristics, surgical technique and outcome. In Germany, patients are advised to delay pregnancy for three months after the procedure. In comparison to caesarean section, the time interval between myomectomy and conception as an independent factor for pregnancy outcome has not yet been sufficiently researched

Methods

This is a retrospective observational study of patients who underwent myomectomy and subsequently delivered in our unit between 2009-2017. Patients were identified from the birth register and their operation notes, histology report and subsequent delivery notes were reviewed.

Results

Data was collected and analysed using Microsoft Excell software.

38 patients were identified with a mean age of 34 years (Range 22 – 44). 66.7% (N=28) were Nulligravida, 50% (n=19) cases underwent laparoscopic myomectomy with single layer closure using polygalactine-acid suture and 50% (n=19) underwent open myomectomy with two layered closure using the same suture material. No intraoperative or immediate post operative complication occurred in both groups. The mean number of fibroids resected was 5,4 (Range 1-39) with a mean weight of 147 g (Range 9,2-1100g). Spontaneous conception occurred in 68% of cases (n=26), 16% patients (n=6)(16%) conceived after IVF treatment and a further 16% (n=6) received fertility treatment other than IVF. The mean time interval between the myomectomy and pregnancy was 10,5 months (range 1-60 months). 16% of patients (n=6) conceived within three months of myomectomy . One case from this group delivered at 32 weeks gestation by emergency caesarean section following preterm labour and uterine rupture. 24% (n=9) conceived between four and six months. In this group no pregnancy related complication was identified and all patients delivered at term . 60 % of patients (n=23) patients conceived after 6 months. In this group, one patient was delivered by urgent caesarean section following preterm labour and placenta accreta at 36 weeks gestation. Regarding the mode of delivery 70 % (n=28) delivered by caesarean section of which 18 were delivered by elective cesarean section.

Conclusions

To our knowledge there are no studies specifically addressing the time interval between myomectomy and conception as an independent risk factor for adverse pregnancy outcome, while the surgical approach, suturing technique, number and location of fibroids resected have been thoroughly investigated as independent factors for pregnancy outcome. Limitations of this study are the small sample size and the retrospective design. Further well designed studies are needed to address this important question.

Free communications 2 | Niche | Fibroids | Laparoscopy

Laparoscopic large cervical fibroid excision in the virgin patient

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Background

A 17 year old virgin patient, she was seen in our clinic with complaints of severe menstrual bleeding and pelvic pain. Gynecological examination and transvaginal ultrasound examination were not performed because of the patient's virginity. Abdominal ultrasonography results showed cervix localized at cervix with the diameter of 8x7cm. She was opted laparoscopic excision of fibroid.

Methods

In order to see posteriorly located large fibroid, retraction suture to the uterus was performed. During the laparoscopic myomectomy due to the size of the fibroid and the proximity to the cervical os, anterior vaginal fornix was open very carefully to see the exact location of cervix. Because there was a high risk of damage to the cervix during removal of fibroid and even the risk of amputation of the cervix in virgin patient.

Results

The cervical fibroid was removed using morcellator.

Conclusions

We believe that this case is important in terms of approaching the risk of irreversible fertility problems as a result of cervical damage and even accidental full amputation of cervix during laparoscopic cervical large myomectomy

<https://player.vimeo.com/video/269965088?autoplay=1>

Virtual Reality (VR) technology : Does large viewing angle from a head-mounted-display (HMD) improves laparoscopic surgery outcomes?

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Background

Contrary to widespread belief , VR technology has been used in surgery for the last decade. The Da Vinci robot is essentially a VR headset attached to a console and it allows the surgeons to perform delicate laparoscopic surgery with the assistance of robotic arms.

The Da Vinci system utilises the three-dimensional headset technology allowing the surgeon to view surgical field in great detail and clarity. Typically, laparoscopic surgery is viewed on a 32 inch high definition monitor with a viewing angle of 60 degrees whereas the Da Vinci system offers a viewing angle of more than 100 degrees.

We wanted to investigate whether the utilisation of VR headset (Head-mounted display, HMD) results in enhanced surgical performance and reduced errors compared to conventional laparoscopic monitors.

Methods

We have developed a modular laparoscopic training simulator capable of utilising HMD and conventional laparoscopic monitors. We have selected 3 different monitors – 15 inch, 21 inch and HMD to reflect varying viewing angle.

Fifty four surgeons (registrars and consultants) completed a validated laparoscopic task in 3 different monitors. Duration of the task, travel distance of graspers and mistakes were recorded.

Results

The larger the viewing angle of the monitor, the less mistakes are performed and movement of the graspers were more economical as well highlighting the advantages of HMD.

Conclusions

HMD technology has the potential to replace conventional laparoscopic monitors and act as an intermediary between total robotic surgery and conventional laparoscopic surgery.

Free Communication 3

ES27-0260

Free Communication 3 | Endometriosis | Laparoscopy

Stretching the borders of laparoscopy: urgent laparoscopic surgeries in the late third trimester

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Background

Laparoscopic management of acute abdominal pain in the late third trimester of pregnancy remains controversial with limited data regarding procedure safety and feasibility. The purpose of this study is to investigate the feasibility, immediate complications and the short term outcomes of laparoscopic surgery during the third trimester of pregnancy, including assessment of the risk for preterm delivery and intra uterine fetal demise (IUFD).

Methods

The clinical data of all patients who underwent laparoscopic surgery between 27-39 weeks of gestation in the Sheba Medical Center between January 2010 and July 2017 were collected and retrospectively analyzed.

Results

Urgent laparoscopic surgery was performed for 12 patients during third trimester, the estimated gestational age of the patients undergoing laparoscopic surgery was 27 to 39 weeks all of them were singleton pregnancies. Laparoscopic surgeries included seven appendectomies, four adenxal torsion release; three of them with cyst aspiration/ cystectomy, and one diagnostic laparoscopy. There were no complications related to the access for any of the 12 laparoscopic surgeries. The laparoscopic surgery procedure was successfully completed for 11 patients, only one laparoscopic appendectomy for perforated acute appendicitis with purulent peritonitis at 30 weeks of gestation was converted to laparotomy because of diminished space. Delivery data were available for ten patients, only one patient had preterm labor at 35 weeks of gestation 6 weeks after laparoscopic appendectomy, because of bleeding placenta previa with suspected placental abruption. None of the cases were complicated with intra uterine fetal demise

Conclusions

Our results demonstrate that laparoscopic surgery for appendectomy and adenxal pathology is feasible and can be safely performed during late third trimester with minimal risk for the patient and the fetus.

Total laparoscopic hysterectomy in patients with deeply infiltrating and severe endometriosis

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Background

to present our experience in the management of patients with deeply infiltrating (DIE) and severe endometriosis (SE) treated with total laparoscopic hysterectomy (TLH), and discuss the difficulties encountered during this procedure when performed in severe forms of this disease.

Methods

we included 14 patients aged 41-46 years. Eleven cases had DIE and 3 SE (ASRM Stage IV) with complete obstruction of the pouch of Douglas. Of these, 11 cases had 2-3 previous surgeries for recurrence of endometriosis or severe pain symptoms. In 3 cases TLH was performed for other main indications (fibroids, endometrial hyperplasia).

Results

the mean size of the DIE nodule was 2.4cm (range: 1.3-4.2). The median duration of the procedure was 216 minutes (range: 168-390). In 13/14 cases (92.9%) it was completed laparoscopically. One patient with a 4cm nodule and extensive diffuse adenomyosis was laparo-converted to perform a type II radical hysterectomy due to inadequate uterine mobility. In all cases the DIE nodule was removed with the shaving technique, and its removal preceded TLH. To safely conclude the procedure, the ureter was dissected unilaterally in 100% and bilaterally in 85.7%, and the pararectal fossa in 100% of cases, respectively. Clipping of uterine arteries and of major branches of internal iliac vessels were performed in 64.9% and 7.2%, respectively. In 2 cases the hypogastric nerve was divided unilaterally, and 3 cases were transfused. No injuries of the urinary tract occurred. Two patients had postoperative bladder dysfunction, and one of these also bilateral temporary apraxia of the peroneal nerve.

Conclusions

TLH in patients with DIE and SE is a demanding and technically challenging procedure. Detailed knowledge of the retroperitoneal anatomy and extensive laparoscopic experience are of paramount importance to avoid serious complications.

Huge uterine niche

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Background

Uterine niches are thinned out myometrium at the site of a previous uterine incision. Most commonly, they follow caesarean section, and hence are presumably displaying a rising incidence, with the world-wide rising CS rates. We present a case of a very large uterine niche, the largest we have ever encountered. We have also ran a literature search, but found none as large.

The patient was a 36 years old lady, with history of 2 previous unremarkable CS deliveries. Two years following the last, she started complaining of symptoms suggestive of uterine niche, for which she was investigated and the diagnosis confirmed.

She then underwent an open repair of the niche, but only a few months later, the symptoms recurred. She still sought surgical repair, that was done laparoscopically in the second time, but re-recurrence of complaints ensued.

Methods

Hysteroscopy revealed the double-cavity sign suggestive of niche. But it was a very large supra-cervical cavity. Laparoscopy was done revealing utero-vesical adhesions overlying a lower segment large bulge. Utero-vesical adhesiolysis exposed a large uterine niche, that was measured by a graded Nelaton tube. The dimensions were 6x5x5 cm. Concomitant hysteroscopy was performed eliciting a trans-illumination signal that confirmed the diagnosis of uterine niche. Excision of the unhealthy scarred uterine tissue was performed until the healthy edges were reached.

Then the large ensuing defect was sutured in 2 layers by a 0-metric polyglactin suture.

Results

After laparoscopic repair, the patient was prescribed menstrual suppression for 3 cycles. For up to 12 months follow up, the patient remained symptom-free.

Conclusions

Timely identification and proper repair using sound surgical techniques spares our patients the suffering of persistent or recurrent symptoms and the agony of repeated improper surgical procedures.

Laparoscopic excision of Accessory Cavitated Uterine Mass (ACUM).

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Background

ACUM is a rare congenital uterine abnormality arising from a defect in the developmental process of the Mullerian ducts. They are characterised by the presence of functional endometrium within a non-communicating uterine cavity and an otherwise normal uterus and adnexae. The latter differentiates them from other classic Mullerian congenital abnormalities.

We present the case of a 19 year old patient with 6 months history of severe dysmenorrhoea and pelvic pain not responding to hormonal treatment.

Methods

Transvaginal ultrasound scan demonstrated a cystic haemorrhagic lesion at the left lateral border of the uterus. MRI suggested a 3cm blood filled lesion on the left side of the uterus consistent with cystic adenomyoma.

On hysteroscopy, the endometrial cavity was arcuate with normal tubal ostia. Laparoscopy demonstrated a 3 cm bulge to the left uterine border below the round ligament. Both adnexae were normal arising from the uterine body in the conventional way suggesting of a non-communicating accessory uterine cavity.

She underwent laparoscopic excision of the lesion. The myometrium was infiltrated with 10ml of diluted argypressin. The plane of dissection was established with difficulty due to the adenomyotic nature of the tissue. The lesion was excised from the lateral uterus and the myometrium and broad ligament peritoneum was closed with vicryl sutures.

Results

The patient was discharged the same day. Histology confirmed cystic adenomyosis with dilated endometrial glands. At the 4 month follow up, she reported minimal dysmenorrhoea.

Conclusions

ACUMs should be considered as a cause of pelvic pain in young patients presenting with severe pelvic pain. A high index of suspicion is necessary as these lesions can be mistakenly thought to be degenerative fibroids or classic adenomyosis that are both not common in very young women. Correct diagnosis is essential as response to medical treatment is poor and only surgical resection of the mass will confer symptom resolution.

<https://player.vimeo.com/video/269480320?autoplay=1>

Free Communication 3 | Endometriosis | Laparoscopy

Needleoscopy for ovarian cyst enucleation: report of the first 15 cases

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Background

The objective of the study is assessing the safety and feasibility of laparoscopic benign ovarian cyst enucleation with novel 2.4 mm needleoscopic instruments.

Methods

In this prospective single-institutional clinical trial we report the first clinical application of this Percutaneous Ultra-Minimally Invasive Approach (P.U.M.A) in gynecology in a series of 15 patients treated for ovarian cysts at the Department of Obstetrics and Gynecology of the “ F. Miulli” Hospital.

Results

The median patient’s age and BMI were 26 years and 22 respectively. The median operative time and estimated blood loss were 55 minutes (range 35–90 minutes) and 35 mL (range 0–80 mL), respectively. No accidental injuries at the trocar site neither intraoperative complications were observed. The median postoperative VAS score was 3 at 2 hours, 5 at 12 hours, and 2 at 24 hours. All patients were discharged on day 1. The patient’s cosmetic satisfaction, using a 10-point scale, was 9 (range 7-10), measured at 30-days postoperative follow-up.

Conclusions

The use of 2.4 mm needleoscopic instruments for ovarian cyst laparoscopic enucleation is feasible and safe, with good results in terms of surgical efficacy and patient’s reported cosmetic outcome. Further studies are needed to establish whether this approach can offer any additional benefits over other ultra-minimally invasive techniques.

Free Communication 3 | Endometriosis | Laparoscopy

Frozen pelvis with para-rectal dissection of deep infiltrating endometriosis

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Background

Deep infiltrating endometriosis is a multifaceted disease with an array of debilitating symptoms. Medical therapies have a limited role in the management of this condition and so surgery remains the mainstay of treatment.

Methods

We present the case of a 39 year old patient with a 6 month history of lower abdominal pain, bloating and pain on defecation. She was also experiencing deep dyspareunia and secondary infertility.

Her previous surgeries performed in Italy included an emergency Caesarean section, laparoscopic right ovarian cystectomy and subsequent laparoscopic drainage of a left tubo-ovarian abscess.

A pelvic MRI scan revealed small bilateral endometriomas tethered to the posterior aspect of the uterus.

Although imaging did not suggest endometriosis infiltrating the bowel, in view of her previous pelvic infection together with her symptoms significant adhesions were anticipated.

Results

Laparoscopy was performed following bowel preparation and a frozen pelvis was encountered. Endometriotic plaque was identified in the recto-vaginal septum.

We demonstrate careful pelvic dissection of a completely frozen pelvis including bowel and para-rectal fossa for excision of endometriosis resulting in restoration of normal anatomy.

There were no intra or post-operative complications. The patient made an excellent post-operative recovery and was discharged home the following day.

Conclusions

Post-operatively there was significant improvement in the patient's symptoms and she is currently trying to conceive.

Complete excision of deep endometriotic plaques and nodules is possible and indeed essential for symptomatic women. It is best carried out in centres of excellence where the required experience and expertise is available.

<https://player.vimeo.com/video/269859665?autoplay=1>

Free Communication 3 | Endometriosis | Laparoscopy

Correlation of CT Colonography and intraoperative findings in large rectosigmoid deep infiltrating endometriosis.

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Background

Endometriosis affects 10% to 15% of the female population of childbearing potential. Endometriosis of the bowel affects more than 20% of patients with deep infiltrating endometriosis. Various techniques are used in the preoperative diagnostics, such as ultrasound, MRI, colonoscopy.

There is limited data regarding the usefulness of CT Colonography, known as Virtual colonoscopy. Despite a number of papers regarding this topic, the technique has not been widely adopted. The objective was to evaluate the correlation between CT Colonography and intraoperative laparoscopic findings based on two cases of rectosigmoid DIE, managed in two different manners.

Methods

CT Colonography consists of two CT scans (upright and face down) after insufflating the colon with air. The acquired images are reconstructed to obtain a complete 3D image of the colon, with detailed views of the bowel wall. This technique identifies large rectosigmoid lesions, with indication of their approximate size and precise location. The advantage of this technique lies in the substantially limited bias caused by bowel peristalsis.

Results

Two patients with suspected rectosigmoid DIE have undergone CT Colonography, showing the presence of large lesions protruding into the bowel lumen. Patients have been qualified for laparoscopic surgery – with findings consistent with imaging results. Patients have been managed using two different techniques – segmental resection/stapler reanastomosis, and large discoid excision with Connell suture reanastomosis. Both patients remain symptom-free (observation period of 18 and 12 months, respectively).

Conclusions

Although Ultrasound and MRI imaging are considered the methods of choice in the diagnostics of bowel endometriosis, CT colonography may be an alternative for lesions that are not sufficiently visualised. It is even advocated that CT Colonography may be superior to MRI in cases of cul-de-sac obliteration with bowel involvement. Also, considering the still better availability of computed tomography, CT Colonography may prove useful in the preoperative diagnostics of rectosigmoid DIE.

<https://player.vimeo.com/video/269957915?autoplay=1>

Free Communication 3 | Endometriosis | Laparoscopy

A Case Report of Anti-N-Methyl-D-Aspartate Receptor Encephalitis: A Multidisciplinary Approach to Treatment

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Background

Our patient is a 24-year old, healthy, single, nulligravid, with no co-morbidities from Metro Manila, Philippines who presented with acute severe, non-productive cough followed by seizure episodes. She was admitted and managed in a tertiary government hospital with an initial diagnosis of viral versus an autoimmune type of encephalitis. Despite medical treatment, patient's condition persisted and bizarre behavior were suddenly noted. The latter consisted of glaring stares, sudden loud laughs, lying on the floor, rolling over and throwing things. A differential diagnosis of a paraneoplastic autoimmune encephalitis was entertained. Further work-up included whole abdominal and transrectal ultrasound which showed a right benign ovarian tumor. Antibody titers for anti-NMDA in CSF taken, showed a positive result, confirming the diagnosis of an Anti-NMDA Encephalitis. Since anti-NMDAR encephalitis is an immune response, the goal of treatment is to reduce the concentration of the anti-NMDAR antibodies. The patient was given corticosteroids to reduce inflammation and intravenous immunoglobulin (IVIg) treatment to boost the immune response. Part of the treatment also includes tumor removal. Hence, the patient underwent a laparoscopic right oophorectomy with frozen section under general endotracheal anesthesia. Frozen section and histopathology results revealed a mature cystic teratoma. On the third day post-op, she exhibited normal behavior with progressive and rapid recovery of neurologic function. She became oriented, seizure-free and with no behavioral irregularities.

Methods

N/A

Results

N/A

Conclusions

For cases with dilemmas in diagnosis and treatment process elimination of the possible etiology in cases like these is very important for the timely intervention and ultimately excellent outcome. Presentation of this case may help increase awareness and provides practical guidance for the general gynecologist with the knowledge of the association of this autoimmune paraneoplastic encephalitis with ovarian teratoma.

<https://player.vimeo.com/video/268613914?autoplay=1>

Free Communication 3 | Endometriosis | Laparoscopy

Surgical approach of rectovaginal and low rectum endometriosis with protective ileostomy

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Background

Recto-vaginal endometriosis consists of endometriotic nodules within the connective tissue between the anterior rectal wall and the vagina, in which the fibrotic component is prevalent. We are developing at our department the 3D sonovaginography to access rectovaginal area, what helps to accurately identify such lesions.

In rectovaginal endometriosis excision of the nodule is the proper solution: in the most complex cases, when rectal wall is involved, resection of the affected intestinal tract may be necessary. Several authors support the role of surgery as first-line treatment.

The decision to perform a laparoscopic segmental colectomy is taken under the following conditions: (1) large direct full-thickness trauma too extensive to be sutured; (2) extensive lesion to the bowel wall musculature in the absence of full-thickness damage but with impact on functionality; and (3) extensive lateral dissection compromising the bowel wall vascularization and/or innervation. In literature, controversy exists with regard to bowel resection.

A defunctioning loop ileostomy is performed only when there are sutures on the vagina, the rectum, and the ureter/bladder. It may be averted in low anastomosis, less than 5 cm from the anal border. An omentoplasty to protect the pelvic sutures is not performed routinely. Complications, such as anastomotic leakage or rectovaginal fistula, after bowel resection and anastomosis can occur.

Methods

The aim of this study is to report a case of rectovaginal and low rectum endometriosis with protective ileostomy. A consent form was applied to the patient.

Results

NFL, 36 years, caucasian, with 1 vaginal delivery and no comorbidities. Main complain is severe dysmenorrhea for 8 years with progressive worsening associated with deep dyspareunia. She has regular menstrual cycles and no gestational desire. At specular examination it was identified a purple lesion with irregular surface bulging from posterior vaginal fornix up to 1/3 superior of the vagina, ant at vaginal touch, a painful and hardened lesion in posterior vaginal fornix of approximately 2.5cm was felt.

A 3D sonovaginography to access rectovaginal area was performed identifying rectovaginal septum adhered with a low rectum lesion of 4.2x1.8x3.1cm; thickening in the uterosacral ligaments: right of 6.6cm and left of 8.6cm; lesion on rectum of 5.7x0.8x2.3cm compromising submucosa 4cm away from the anal border

Pos operative measures included metronidazol for 48h and ceftriaxone for 5 days, oral liquids after 24h of the procedure. The diet developed for pasty, light and general on consecutive days and she was dismissed in 5 days after the procedure.

Conclusions

Ultrasonography has high sensitivity for the detection of deep endometriosis, mainly this the 3D technique. In case of low rectum lesions, protective ileostomy is an option to avoid complications.

<https://player.vimeo.com/video/272662127?autoplay=1>

Acute adnexal torsion: Is immediate surgical intervention associated with a better outcome?

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Background

To investigate whether surgery of patients with acute adnexal torsion performed within 6 hours of emergency room (ER) admission is associated with lower rates of adnexal ischemia.

Methods

A retrospective study, conducted at two university-affiliated medical centers, assessed women aged 15 to 45 years with adnexal torsion who presented at the ER within 12 hours of pain onset and underwent surgery within 24 hours of ER admission. The patients were divided into 2 groups: early, surgical intervention within less than 6 hours and late surgical intervention between 6 to 24 hours. The primary outcome was the rate of grossly appearing ischemic adnexa.

Results

220 women fulfilled the inclusion criteria. In 101 women the adnexa appeared ischemic. There was no difference in the rate of ischemic adnexa between early and late intervention groups. (48% vs. 40%; $p=0.269$). No significant association was found between the physical or ultrasonographic findings and the rate of ischemic adnexa within each group.

Conclusions

In patients undergoing surgery for acute adnexal torsion, surgery within less than 6 of admission hours is not associated with a lower rate of adnexal ischemia.

Free Communication 3 | Endometriosis | Laparoscopy

Endometriosis flare up

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Background

Immune deficiencies that hinder clearance of endometriotic implants, are hypothesized in the development of endometriosis.

Juvenile rheumatoid arthritis (JRA) is mainly diagnosed by the appearance of arthritis, along with positive serum markers. The mainstays of treatment are non-steroidal anti-inflammatory drugs (NSAIDs), corticosteroids, disease-modifying anti-rheumatoid drugs (DMARDs), and biological agents. All have an immune-suppressing effect.

We present a case of a young lady who has had JRA, and she presented with an extensive form of endometriosis, representing a possible role of the immune-deficient state on the course of endometriosis.

Over the last year, she developed progressive abdominal enlargement due to ascitic collection. Paracentesis was performed 3 times, but with rapid re-accumulation. Examination of the ascetic fluid was not conclusive.

Methods

Laparoscopy was performed revealing 4000 cc of haemorrhagic ascitis.

Innumerable endometriotic spots were scattered all over the pelvis, upper and lower abdomen, including the diaphragm. Millitary endometriotic spots were also found on the bowel, and bladder. Both tubes and ovaries were adherent to the back of the uterus.

There was also a shortened and kinked appendix, adherent retro-caecally.

Adhesiolysis was performed, biopsies from the peritoneal and bowel nodules and appendectomy was done. The accessible endometriotic spots were cauterized. The patient was started on menstrual suppression by triptorelin 3.75 mg monthly injections.

Results

Histopathological examination of all lesions, including the appendix, confirmed the diagnosis of endometriosis.

The patient experienced remarkable improvement post-operatively, up to 9 months follow up, with no re-accumulation of ascites.

Conclusions

Endometriosis is possibly linked to impaired immune clearance of heterotopic endometrium. When immunity is compromised, endometriosis may flare up and assume an aggressive course as seen in this case.

This may be in favour of the immune theory of endometriosis, and may help guide the decisions of both gynaecologists and rheumatologists dealing with similar cases.

<https://player.vimeo.com/video/269905192?autoplay=1>

ES27-0381

Free Communications 4 | Urogynaecology | Fibroids | Hysterectomy

Laparoscopic approach for shall repair of Pelvic Floor Defects: tricks and tips

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Background

Anatomy of pelvic wall (PW) uses synergistic action of bones, muscles, pelvic fascias and ligaments to maintain in situ uterus, vagina, bladder, urethra and rectum. Trauma, intrinsic laxity, deliveries and age may create defect at any level of this structure effecting pelvic organs prolapse (POP). According to the National Health and Nutrition Examination Survey, approximately 3% of women in the United States report symptoms linked to POP. There are approximately 300,000 POP surgeries each year in the United States. Obviously, different defects make different effects on pelvic static. In particular, vaginal suspension is guaranteed by 3 consequential levels described by DeLancy: upper or first level secured by uterosacral ligaments (USL) and cardinal ligaments, which suspends uterus and vaginal apex and maintains vaginal orientation respect PW; medial or second level performed by tendinous arc of pelvic fascia, which prevents prolapse of vaginal walls, and lower or third level made by Perineum's muscles and ligaments, which ensures urethra and rectum to the lower third of vagina. Most common defects in these three levels affect the first one, causing apex defects of vaginal apex and hysterocele.

Methods

Suturing the apex to the high (proximal) portion of each uterosacral ligaments (USL) is more commonly performed vaginally, although abdominal and laparoscopic approaches are suitable. As described by Shull & al., this operation is made vaginally, as treatment for isolated apex defect or severe hysteroceles with anterior downhill. However, this approach offers very little visualization of anatomical landmarks, an increased risk of ureteral injury, requiring the surgeon a great knowledge of vaginal anatomy to avoid complications. So, we tried to counter the foreseen difficulty of vaginal approach, turning it into laparoscopy.

Results

So, we tried to counter the foreseen difficulty of vaginal approach, turning it into laparoscopy.

Conclusions

Laparoscopic approach for Shall repair of pelvic floor's defects offers the opportunity to maintain "under view" for all the intervention all the fundamental structures and "hot spot" in this technique, such as the posterior compartment and ureter course, which couldn't be observed during traditional vaginal approach. So, this kind of variation, maintain a minimal invasive treatment for POP, allowing the surgeon to choose between a vaginal standard treatment and a laparoscopic one, pending on his attitude and choice.

Free Communications 4 | Urogynaecology | Fibroids | Hysterectomy

Pelvic reconstructive surgery with mesh versus Lefort colpocleisis for recurrent pelvic organ prolapse

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Background

To evaluate the efficacy and safety of pelvic reconstructive surgery with mesh versus Lefort colpocleisis for recurrent pelvic organ prolapse.

Methods

Dates were retrospectively reviewed from patients with recurrent pelvic organ prolapse underwent pelvic reconstructive surgery or Lefort colpocleisis at a center between March 2012 and April 2017. All patients were evaluated using the Pelvic Organ Prolapse Quantification (POP-Q) assessment. The Chinese version of the Pelvic Floor Distress Inventory Questionnaire (PFDI-20) was used to evaluate self-perceived quality of life. The Chinese validated version of the Patient Global Impression of Improvement scale (PGI-I) was used to assess self-perceived of success and subjective measures of satisfaction. The Clavien-Dindo classification (CD) was used to analyze the safety of the procedure. Chi-square and Student's *t*-tests were used for two independent samples.

Results

41 patients with recurrent POP underwent surgical management, of 15 pelvic reconstructive surgery with mesh (A group), and 26 Lefort colpocleisis (B group). There was significant difference in the mean age (years) (61.3 (4.9) vs. 71.8 (7.3)). The total mean time to recurrence were 5.7 years, there was no difference in both groups. There was no difference in the mean operative time (minutes) (89.2 (34.7) vs. 74.9 (21.3)) and in the mean blood loss (ml) (62 (32.8) vs. 63.4 (27.1)). There was no intra-operative bladder lesion or rectal lesion. Postoperative urinary tract infection (UTI) requiring antibiotics was recorded in 3 cases, 1 (6.7%) in A group, 1 (3.8%) in B group; Post-void residual volume was noted in 5 cases, 2 (13.3%) in A group, 3 (11.5%) in B group. Minor complications were classified as CD grade I in 13.3% of A group, as CD II in 20% of A group, and in 15.4% of B group. No CD grade III, IV or V complications occurred. At a separate mean follow-up of 46.1 months in pelvic reconstructive surgery and 33.1 months in Lefort colpocleisis, all patients had significant resolution of awareness of prolapse, had < stage 2 POP-Q on examination and high levels of satisfaction on PGI-I after surgery.

Conclusions

This study suggests that pelvic reconstructive surgery with mesh and Lefort colpocleisis are feasible and safe for recurrent pelvic organ prolapse. Further studies with larger samples and wide-spread evaluation are necessary.

Free Communications 4 | Urogynaecology | Fibroids | Hysterectomy

Laparoscopic sacrocolpopexy: where to stop the anterior dissection?

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Background

Study Objective:

To describe the anterior mesh position in relation to the bladder neck after laparoscopic sacrocolpopexy (LSCP) and to assess a possible correlation of this ultrasound measurement with postoperative anatomical result.

Methods

We performed a prospective cohort study including 63 women with genital prolapse operated of laparoscopic sacrocolpopexy (LSCP). A transvaginal ultrasound was performed to all patients after surgery with a measurement of the distance between the bladder neck, identified by the balloon of the bladder catheter, and the caudal extremity of the anterior mesh (BMD). The stage of prolapse was assessed with POP-Q before and 1 month after surgery. Postoperative satisfaction was evaluated with the patient global impression of improvement score (PGI- I).

Results

Ultrasound was feasible in all patients, and allowed visualization of the anterior mesh without difficulty in the totality of cases. The BMD ranged from 0 to 13 mm (mean \pm SD; 5.3 ± 3.1 mm). The BMD correlates with severity of prolapse (C and Bp, $P= 0.02$ and 0.05 respectively), with postoperative apical result and complication rate but not with postoperative anterior results. No major complications were reported; "de novo" stress urinary incontinence occurred in 23.8% of cases.

Conclusions

BMD is a reliable measure to assess the position of the anterior mesh with a high detection rate and can be used to standardize the mesh positioning. It is not correlated with the postoperative anterior result but it has a clinical significance correlating mainly with the postoperative apical result and the occurrence of postoperative complications.

Comparison between horizontal & vertical suturing in closing the vaginal vault in Total Laparoscopic Hysterectomy(TLH)

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Background

The aim of this randomized controlled study was to compare vertical versus horizontal suturing in vaginal vault closure in total laparoscopic hysterectomy (TLH) both in laparoscopic and vaginal routes.

Methods

It is a multicentric prospective RCT performed in Helwan & Ain Shams University Hospitals in Cairo, Egypt. During the study period from July 2017 to March 2018, 60 patients underwent TLH. Patients were randomly divided into two groups (30 Laparoscopic and 30 Vaginal), each group was subdivided into two groups (15 vertical and 15 horizontal).

Vicryl sutures were used in closing the vaginal vault in all cases. Difficulty was assessed by VAS scale (Visual Analogue Scale) by the operator where 1 is the easiest and 10 the most difficult. In addition, early (first week) and late postoperative complications were reported.

Results

The four subgroups were comparable regarding parity, BMI, previous births, medical and surgical history.

The overall VAS for difficulty was 4.2 with average time of 4 minutes for the vaginal route and 5.9 with average time of 7 minutes for the laparoscopic route.

Regarding comparing vertical versus horizontal suturing in each group, no statistical significance ($p > 0.1$) in difficulty or time was found in the vaginal route. However, in the laparoscopic route vertical suture was significantly easier than horizontal suturing (VAS 5.1 versus 6.8) and significantly faster (6.4 minutes versus 8.9 minutes).

All cases pass uneventful except the first case of vaginal vertical suturing where mild vaginal spotting in the second day postoperative.

Conclusions

Vaginal vault closure can be performed safely and effectively both vaginally and laparoscopically. Vaginal route for vault closure was shorter and easier than laparoscopic route. Vaginal horizontal suturing was comparable to vaginal vertical. Laparoscopic vertical was easier and faster than laparoscopic horizontal.

Histopathological findings in uterine myomas with high vascularity at ultrasound: a series of 70 cases

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Background

To correlate the ultrasound appearance of highly vascularized uterine myomas with the histopathological diagnosis.

Methods

This retrospective study included patients presenting with an ultrasound diagnosis of uterine myoma characterized by a circumferential and intralesional vascular pattern with a color score assessment of 3 or 4, according to the Morphological Uterus Sonographic Assessment (MUSA). All the patients underwent myomectomy or hysterectomy after the ultrasound examination. The ultrasound appearance of the myomas was analysed and described using the terms and definitions of MUSA paper. The echogenicity of each myoma, the presence of cystic areas and the total myoma volume were recorded. The ultrasound characteristics were compared with the histological diagnosis.

Results

70 patients were included in this study. Mean patient age was 46.5 years (range 24.0-88.0), 57 (81.4%) were in premenopause, 68 (97.1%) showed symptoms (menorrhagia, dysmenorrhea, anemia, urinary frequency). At histological examination 32 (45.7%) myomas were typical leiomyomas, 29 (41.4%) myomas were compatible with a diagnosis of variants of leiomyoma (19 (65.5%) hypercellular, 5 (17.2%) myxoid, 3 (10.3%) apoplectic, 1 (3.1%) epithelioid, 1 (3.4%) atypical or symplastic or bizarre), 4 (5.7%) were adenomyomas. 1 (1.4%) uterine smooth muscle tumors of uncertain malignant potential (STUMP) was observed. 5.7% (4) of the lesions were malignant at histology (1 (1.4%) G3 neuroendocrine tumor, 2 (2.8%) uterine sarcomas, 1 (1.4%) leiomyosarcoma). Cystic areas within the lesion were found in 55.1% (16/29) of variants of leiomyoma, in 31.5% (10/33) of typical leiomyomas, in 100% (4/4) of adenomyomas, in the STUMP and in the leiomyosarcoma. The variants of leiomyomas were larger lesions than typical leiomyomas (maximum mean diameter 92.3 ± 30.5 vs 81.3 ± 29.9), most of fibroids occupied the anterior (37.1%) and posterior (32.8%) walls of the uterus and most were intramural (82.8%). No submucosal fibroma was observed. The mean of patients with malignant lesions was greater than the average of the total population (70.7 ± 13.9 years vs 46.5 ± 11.4 years).

Conclusions

Ultrasound aspects of myomas, such as circumferential and intralesional vascularity, cystic areas and dimensions are important parameters, especially when combined to the patient's age. Such features could be useful to differentiate typical myomas from benign variants and malignant lesions in a pre-operative setting and to select patients that may benefit from a conservative medical treatment rather than a surgical one.

Defecation symptoms among women undergoing pelvic organ prolapse surgery

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Background

To describe the prevalence of defecation symptoms before and after pelvic organ prolapse (POP) surgery and to measure associations between defecation symptoms and degree of posterior vaginal wall prolapse in a nationwide cohort from Finland.

Methods

We recruited 3515 women operated for POP during 2015 for this longitudinal cohort study. Participants completed Pelvic Floor Distress Inventory (PFDI-20) questionnaires at baseline and at 6 and 24 months after surgery. Nine questions were defecation-related (splinting, straining, incomplete emptying, fecal incontinence (formed stool), fecal incontinence (loose stool), flatal incontinence, painful defecation, fecal urgency, rectal prolapse) and included in this analysis. The bother caused by symptoms was categorized into two groups: no/mild bother and moderate/severe bother. Degree of prolapse was categorized into 4 groups: stage 0, stage 1, stage 2 and stage 3-4 according to Pelvic Organ Prolapse Quantification System (POP-Q). We created univariable and multivariable regression models to assess the association between posterior wall prolapse stage and prevalence of moderate/severe bother for each of the nine symptoms. We compared the changes in symptom prevalence between baseline and six and 24-month follow-up assessment.

Results

Questionnaires were available for 2924, 2528 and 2351 patients at baseline, 6 months and 24 months, respectively. Prevalence of defecation symptoms at baseline was high with 2637 (90%) patients presenting with at least one symptom of any degree of bother and 1474 (50%) with at least moderate bother. Risk of obstructed defecation symptoms (splinting, straining, incomplete evacuation), painful defecation and rectal prolapse increased strongly with advancing posterior prolapse stage (adjusted OR's 2.0-2.8, stage 0 as reference, $p \leq 0.001$ for all), whereas the association was less evident for urgency and incontinence symptoms (loose stool or gas) (adjusted OR's 1.3-1.6, stage 0 as reference, $p=0.001-0.03$). Degree of prolapse did not correlate with incontinence of formed stool.

All symptoms were significantly improved at 6 months ($p < 0.0001$). Obstructed defecation symptoms responded best to prolapse repair, the prevalence of moderate/severe symptom decreasing from 23-26% to 6-7% (RR 0.22-0.29, $p < 0.001$). Smaller improvement was observed for urgency and anal incontinence from 6-23% to 3-11% (RR 0.37-0.49, $p < 0.0001$). Rectal prolapse was the only symptom which associated more clearly with prolapse stage but showed smaller response to surgery (RR 0.41, $p < 0.0001$). At 24 months, the change in prevalence remained significant compared to baseline for all symptoms ($p \leq 0.001$ for all). However, an increase between

6 to 24 months was observed for all symptoms ($p \leq 0.009$ for all). The prevalence of obstructed defecation symptoms at 24 months was 8-10 %.

Conclusions

Defecation symptoms were common among women undergoing POP surgery, and improved significantly after surgery. The biggest improvements were observed for symptoms that were anatomy-related.

Free Communications 4 | Urogynaecology | Fibroids | Hysterectomy

Laparoscopic hysteropexy

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Background

The restoration of pelvic organs with the prolapsus of uterus and vaginal wall after prolonged vaginal delivery and the successful sexual intercourse..

Methods

The prevalence of pelvic organ prolapsus is not certain but the probability of surgery because of prolapsus or incontinance is % 11-19 in whole life of a woman (1,2). Although the high recurrence rate of hysteropexy, it is recommended to preserve the fertility. Instead of abdominal hysteropexy which has higher mortality and morbidity rate, the pessary application was first choice before the minimal invasive surgery (1,2). The development of minimal invasive surgery raised the number of surgery for prolapsus and indirectly the hospitalisation, postoperative pain and the recovery was decreased steadily with popularity of endoscopic approach. The recurrence rate of laparoscopic or robotic hysteropexy is higher than the sacral suspension of vaginal wall. Different methods were applied to decrease the recurrence rate. Finally the karavat technique in the hysteropexy seems to be better technique. The complete healing was %91.7 in 5 years and %96.9 in 6 years.

Results

The case was about a woman that visited the gynecology department for prolapsus of uterus and vaginal wall that was graded as stage 4 for the POP-Q classification. She had an infertility desire so that we planned the laparoscopic hysteropexy

Conclusions

The hundred percent of restoration and the successful intercourse with the satisfied women.

<https://player.vimeo.com/video/267748523?autoplay=1>

Exosomal metastasis associated lung adenocarcinoma transcript 1 promotes angiogenesis and predicts poor prognosis in epithelial ovarian cancer

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Background

Exosomes mediate cell-cell crosstalk in cancer progression by transferring their molecular cargos, including long noncoding RNA (lncRNA). Metastasis-associated lung adenocarcinoma transcript 1 (MALAT1) is a well-known lncRNA associated with cancer angiogenesis and metastasis. However, the presence of MALAT1 in exosomes and the roles and clinical values of exosomal MALAT1 in epithelial ovarian cancer (EOC) remain unknown. The present study focused on the crosstalk between EOC cells and endothelial cells mediated by exosomal MALAT1, and aimed to explore the roles of exosomes and exosomal MALAT1 in EOC angiogenesis and to reveal the clinical relevance and prognostic value of serum exosomal MALAT1 in EOC.

Methods

Exosomes were isolated from cells and serum samples of EOC. Exosomes were identified using transmission electron microscopy (TEM), nanoparticle tracking analysis (NTA) and western blotting and labelled using the green dye PKH67. A series of in vitro and in vivo functional assays were conducted to investigate the roles of exosomes and exosomal MALAT1 in EOC angiogenesis. Tumour angiogenesis PCR array and confirmation experiments were conducted to explore the downstream genes of exosomal MALAT1. Clinically, the clinicopathological correlation and survival analyses were assessed and a predictive nomogram model was constructed to reveal the clinical relevance and prognostic value of serum exosomal MALAT1 in EOC.

Results

We observed that MALAT1 was increased in both metastatic EOC cells and their secreted exosomes. Exosomal MALAT1 derived from EOC cells was transferred to recipient human umbilical vein endothelial cells (HUVECs) via exosomes. In vitro and in vivo assays revealed that MALAT1 knockdown impaired the exosome-mediated proangiogenic activity of HUVECs through certain key angiogenesis-related genes. Clinically, MALAT1 could be detected in the exosomes of serum collected from EOC patients. Elevated serum exosomal MALAT1 was highly correlated with an advanced and metastatic phenotype of EOC. Univariate and multivariate survival analyses indicated that serum exosomal MALAT1 was an independent predictive factor for EOC overall survival (OS). Based on these results, a prognostic nomogram model was constructed and the model showed a good prediction of the probability of 3-year OS of EOC patients according to the c-index (0.751, 95% confidence interval [CI]=0.691-0.811) and calibration curve.

Conclusions

our data provide a novel mechanism by which EOC cells transfer MALAT1 via exosomes to recipient HUVECs and influence HUVECs by stimulating angiogenesis-related gene expression, eventually promoting angiogenesis. Additionally, circulating exosomal MALAT1 can serve as a promising serum-based, noninvasive predictive biomarker for EOC prognosis.

Free Communications 4 | Urogynaecology | Fibroids | Hysterectomy

Diffuse uterine leiomyomatosis with infertility: the reproductive outcomes after abdominal and/or hysteroscopic surgery

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Background

Diffuse uterine leiomyomatosis (DUL) is a rare condition that is characterized by the diffuse dissemination of numerous, small (usually <3 cm), and ill-defined benign leiomyomata throughout the entire myometrium. The disease is usually found in women of reproductive age, who present with menstrual changes, dysmenorrhea, abdominal masses and pressure, and infertility. This study aimed to investigate the reproductive outcomes of diffuse uterine leiomyomatosis with infertility after abdominal and /or hysteroscopic surgery.

Methods

A retrospective analysis of 18 patients diagnosed as diffuse uterine myomatosis combined with infertility from January 2010 to May 2017 in Peking university Third hospital was conducted. Clinical characteristics and treatments methods were recorded, and pregnancy outcomes were followed up.

Results

In 12 women, hysteroscopic myomectomy were used to excise only myomas impinging into the endometrial cavity, while leaving other intramural myomas in place. Among them 8 women achieved clinical pregnancies, and 7 women had successful live birth. 5 women underwent hysteroscopic myomectomy more than 2 times and all of them had term delivery. Among the left 6 DUL women who were treated by abdominal myomectomy (laparotomy or laparoscopy) with or without hysteroscopic surgery, 3 patients suffered severe intrauterine adhesion, only 2 women got live birth. 3 women conceived spontaneously and others conceived with the help of In vitro fertilization-embryo transfer (IVF-ET).

Conclusions

Women with DUL can be treated by several-step hysteroscopic resection, which may successfully preserve endometrium and further improve the reproductive outcomes. Extensive abdominal myomectomy may not benefit the reproductive needs. Active IVF-ET may increase the pregnancy chances.

Free Communications 4 | Urogynaecology | Fibroids | Hysterectomy

Clinical outcomes, complications and patient satisfaction: 10 years of Laparoscopic Sacrocolpopexy and Laparoscopic Sacrohysteropexy for the management of apical prolapse

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Background

The purpose of this project was to assess demographics, objective anatomical outcomes, complication/ recurrence/ reoperation rates and validated subjective patient reported outcomes in women who have undergone laparoscopic sacrocolpopexy (LSC) and laparoscopic sacrohysteropexy (LSH) within our unit over the last 10 years.

Methods

A retrospective audit of all LSC and LSH cases undertaken April 2007 - April 2017. A comprehensive "proforma" addressed patient demographics, surgical history, operative details, anatomical outcomes, complications, findings/outcome at 1st review and clinical course thereafter. Electronic Care Record review ensured capture of patients who may have subsequently undergone additional surgery at a different unit. Patient reported outcomes assessed via telephone consultation using International Consultation on Incontinence Vaginal Symptoms questionnaire (ICIQ-VS), Patient Global Impression of Improvement Scale (PGI-I) and satisfaction measured using the question "would you recommend to family member or friend".

Results

The setting was a secondary level health care facility. 41 patients were identified from a clinical coding search. 29 patients underwent LSC and 12 patients underwent LSH. Average follow-up time 42 months (range 6-112). Average: age 61.8 yrs, parity 3 and BMI 26.2 (range 18.4-38.6). Average operating time LSC 113 min and LSH 104 min. Major complication rate LSC n=2 (6.9%) and LSH 0%. Minor complication rate LSC n=8 (27.6%) and LSH n=1 (8.3%). Average inpatient stay LSC 1.9 days and LSH 1.6 day. Recurrence/failure rate LSC n=1 (3.4%) and LSH n=2 (16.6%). Reoperation rate LSC n=5 (17.2%) and LSH n=2 (16.6%). No mesh complications. Patient telephone review response rate: LSC 79.3% (n=29) and LSH 75% (n=9). ICIQ VS scores very favourable for both procedures. PGI scores averaged '5' (much better) for both procedures. 82.6% of patients who responded would recommend LSC. 75% of patients who responded would recommend LSH.

Conclusions

Patients are confused regarding recent controversial media coverage of "Mesh". Our series demonstrates very high long term clinical success, very low complications rates and interestingly a high recommendation rate.

ES27-0017

Free Communications 5 | Fibroids | Laparoscopy

Normal spontaneous vaginal delivery after transcervical radiofrequency ablation of uterine fibroids: case report

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Background

Transcervical delivery of radiofrequency (RF) energy to uterine fibroids has been reported, and employs concurrent imaging to ablate specific fibroids. A CE marked device, the Sonata® System, integrates intrauterine sonography with RF ablation in a single handheld device. A graphical interface (SMART Guide™) depicts the user-selected deployment position of the RF electrodes and associated ablation, enabling the operator to determine the optimal size and position of each ablation while maintaining thermal energy within the uterine serosal margin. Published safety and clinical efficacy results for the Sonata System has been positive, and there is a growing literature base for pregnancy after RF ablation in general, and Sonata specifically. This is a report of a recent pregnancy and delivery after transcervical RF ablation with the Sonata System at a community hospital in Köln, Germany.

Methods

A 33-year-old Gravida 1, Para 0 patient presented with heavy menstrual bleeding attributable to uterine fibroids. Transvaginal sonography revealed a 28 mm submucous fibroid (International Federation of Gynecology and Obstetrics [FIGO] type 2) in the left anterior uterine wall. After considering options including hysteroscopic myomectomy, the patient desired transcervical RF ablation with the Sonata System, and this was performed under general anesthesia. Intraoperative intrauterine sonography (performed with the integrated Sonata intrauterine ultrasound probe), confirmed the FIGO type 2 myoma measuring 27 mm x 23 mm. A 25 mm x 35 mm ablation zone was placed in the fibroid. This was accomplished using the Sonata System's graphical overlay to display the location and boundary of the ablation prior to deployment of needle electrodes into the fibroid. After deployment of needle electrodes and confirming safe placement within the uterine serosal margins, RF energy was activated; total time at temperature (105° C) was 110 seconds.

Results

Two weeks postoperatively, a contrast-enhanced magnetic resonance study indicated that 60% of the fibroid was no longer perfused. A follow-up imaging study after 24 months revealed no residual fibroid and the patient noted eumenorrhea. Thirty-three months post-ablation, the patient was confirmed to be pregnant. After an unremarkable antenatal period, the patient went into labor at 39 weeks' gestation and had a normal spontaneous vaginal delivery of a liveborn female infant with Apgar scores of 8¹/9⁵/10¹⁰ and a birth weight of 3670 grams. There were no complications.

Conclusions

This is the first known vaginal delivery after transcervical RF ablation with the Sonata System and the first such delivery in Germany. A previously reported pregnancy from the FAST-EU study in Mexico involved an elective repeat Cesarean section. A global registry trial (SAGE) is in progress to accumulate data on additional pregnancies after treatment with the Sonata System, and another study (the OPEN Clinical Trial) is evaluating the status of the endometrial cavity with regard to adhesiogenesis status-post transcervical RF ablation.

Uterine cavity assessment after endometrial ablation – challenges in women presenting with postmenopausal bleeding

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Background

Endometrial ablation (EA) is the first line surgical treatment for menorrhagia. A recent national audit showed that 10-12% of women underwent EA in England and Wales between 2009-2012. However, EA is not without risks, and it is only in recent years that the long-term challenges are becoming apparent. Accessing the uterine cavity to investigate postmenopausal bleeding (PMB) can be difficult following EA due to intrauterine adhesions. This study evaluates the feasibility of endometrial assessment in these women.

Methods

This cross-sectional study was conducted on women who were referred to the PMB clinic at Sandwell and West Birmingham Hospitals NHS Trust, UK between 1 January 2011 and 31 December 2015. Success in outpatient endometrial sampling, hysteroscopic access to uterine cavity and visualisation of endometrium were compared between those who underwent EA vs those who did not.

Results

Of 2010 women attended PMB clinic, 1016 were excluded because of endometrial thickness (ET) of ≤ 4 mm on transvaginal ultrasound scan i.e. further endometrial assessment deemed unnecessary. The number of women included in the analysis was 994: 16 (1.6%) had EA v 978 (98.4%) had no EA. In the EA group; 9 underwent Thermachoice, 6 Microwave and 1 Novasure. When compared to the no EA group, those who underwent EA were significantly younger (54 v 61 years, $p=0.02$) and closer to the menopause (3.7 v 11 years, $p=0.005$). However; there was no statistical difference between EA group and no EA group as regards parity (100% v 88.3%, $p=0.15$), HRT use (0% v 7.6%, $p=0.63$), Caesarean section rate (25% v 22%, $p=0.23$) or body mass index (33 v 31, $p=0.42$).

The success rate of performing Pipelle sampling was significantly lower in women with previous EA (11/16, 69% v 869/978, 89%; $p=0.03$). There was no difference in the rate of accessing the uterine cavity on outpatient hysteroscopy (2/2, 100% v 49/50, 98%; $p=1$) or hysteroscopy under general anaesthetic, GA (7/7, 100% v 261/267, 98%; $p=1$) between the two groups. However; 7 out of 9 (77.8%) women were deemed unsuitable for outpatient procedure and booked straight for hysteroscopy under GA.

Conclusions

This small study adds to the growing evidence of the difficulty in assessing the uterine cavity after EA. The destruction of endometrial lining reduces the feasibility of Pipelle endometrial sampling and mandates performing hysteroscopy under GA. A well-conducted multi-centre study with large sample size is required to confirm the findings.

Free Communications 5 | Fibroids | Laparoscopy

Laparoscopic excision of ovarian dermoid cyst

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Background

Dermoid cysts represent almost 10 % of ovarian masses. They are more common in women of reproductive age. Dermoid cysts can be complicated by ovarian torsion, cyst rupture, cyst infection and rarely malignant transformation.

Methods

This lady is in her 20s. she was being investigated for primary subfertility. Her USS has shown a 7 cm dermoid cyst on her right ovary. She was very keen to preserve her fertility and hence agreed on laparoscopic ovarian cystectomy following counselling about the residual ovarian function following dermoid cystectomy and the risk of oophorectomy.

Results

Laparoscopic ovarian cystectomy is the management of choice for excision of Dermoid ovarian cysts. Laparoscopic ovarian cystectomy for Dermoid cysts involve the risk of rupturing the cyst during the process with spillage of its contents into the peritoneal cavity. Despite being able to remove all the spilt contents from the pelvis by careful and frequent pelvic lavage, chemical peritonitis has been reported in some patients. Chemical peritonitis can be of detrimental morbidity for some patients resulting in prolonged hospital stay, intensive medical treatment, bowel obstruction and requiring one or more laparotomies.

Conclusions

The procedure was completed laparoscopically. The dermoid cyst was excised intact with no pelvic spill and the cyst was drained inside an Endo-bag prior to extraction through the 10 mm suprapubic port. The patient had uneventful recovery. The histopathology examination of the specimen confirmed mature teratoma.

<https://player.vimeo.com/video/267768984?autoplay=1>

Laparoscopic treatment of pelvic abscess, severe adhesion and using thrombin foam for hemorrhage

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Background

This is a case video demonstration of laparoscopic treatment of pelvic abscess and severe adhesion. 39y, G1P1Y2, history of c-section for twin pregnancy with placenta previa totalis cesarean in 2017. She was suffering from intermittent fever when she was admitted to the hospital with severe pelvic pain. Fever was 37.6. The other laboratory results as follows; WBC: 12.99 Hgb: 11.8 PLT: 610 CRP: 250. Vaginal culture and urine culture was normal. 3 positive leukocytes were detected in urine test. Combination antibiotics therapy with penicillin, gentamicin and clindamycin was started. 02.02.18 laboratory results were as follows; CRP 223 WBC: 13.77 HGB: 11.4 PLT; 690. On 05.02.2018, urgent operation decision was made with the diagnosis of abscess, continuous intermittent fever, clinical weakness, persistence of ultrasound findings, and elevated laboratory results. The department of infectious diseases stop the antibiotics regime and amikacin and tienam were started. Pelvic ultrasound revealed that there was no evidence of abscesses, only cystic lesions. For this reason, Ca125: 75.90 Ca19.9 60.2 Ca15-3: 14.8 was requested.

Methods

The operation was performed laparoscopically. Both of the tuba were dilated. Abscess size with the dense adhesions were 6x4.5 cm on the right and 6x5 cm on the left. Both abscesses were seated douglas. The colon was also attached to the abscess location. There were severe adhesions around the uterus and the suture was applied in order to obtain extensive retraction. Both tuba were dilated. Abscess were drained and bilateral salpingectomy was performed. The abscess capsule was expelled. Thrombin foam was applied to the bleeding locations in the left abscess site. Hemostasis with sponge was also used for this purpose. Following the bleeding control, the drain was applied through the douglas.

Results

Postoperative first day CRP: 393 HGB: 9.2. Two units of erythrocyte suspension were given. On 08.02.18 CRP: 245. On 09.02.18 she has side chest pain. CRP: 121 Ddimer was 2916. Thrombolytics treatment was started. She was discharged with HGB: 13.4 CRP: 67, and the fever was 36.4. thrombolytics treatment and antibiotics were prescribed. Follow-up appointment was given fortnight and the results was CRP: 3.1 Ddimer was 227 on 23.02.18

Conclusions

This is the one of the case amongst our series of laparoscopic pelvic abscess treatment. There was no complication. Thrombin foam was very effective in order to control bleeding in this condition. This type of operations should be performed in tertiary referral centres in order to avoid complications and multidisciplinary approach when its needed

Left-right asymmetry of tubal pregnancy: a 12-year retrospective hospital-based study

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Background

Risk factors for, and the mechanism of, tubal pregnancy (TP) have both been extensively studied, but it is unclear whether there is left-right asymmetry of TP.

Methods

We used data from the digital medical records system of the hospital. Women diagnosed with ectopic pregnancy (EP) between January 2005 and December 2016 in the inpatient department of gynaecology were included. All data from the medical files were obtained retrospectively, including demographic characteristics, reproductive, gynaecological and surgical history, clinical features and treatment. Patients who were previously treated by salpingectomy or non-surgical management and those with unknown-site EP or non-tubal pregnancies were excluded. Statistics method included binominal test, Pearson's χ^2 test and student's t test.

Results

A total of 6,186 TP patients treated surgically were included. The overall frequency of right-sided TP was 54.48% (3,370/6,186), which is significantly higher than 50% ($P < 0.001$). The proportion of right-sided TP decreased with age (P for trend = 0.007) and from the proximal (interstitial) end to the distal (fimbrial) end of the tube (P for trend = 0.017). Of the TP patients with a corpus luteum, we found that the corpus luteum was more frequently located in the right ovary ($P < 0.001$) and it located in the contralateral ovary to the TP side in 41.38% of cases. However, tubal rupture was more frequent in left TP than the in right TP ($P = 0.005$).

Conclusions

The left-right asymmetries of TP include right side dominance and the clinical feature differences between the two sides of TP.

Free Communications 5 | Fibroids | Laparoscopy

Dr Modi's day care hysterectomy

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Background

Hysterectomy is one of the commonest surgery that a woman has to undergo. Hysterectomy is also considered to be a major surgical procedure. Every patient who has to undergo this surgery is worried about how long the recovery is going to take, and how much is the pain and suffering involved in the surgical procedure.

In Dr Modi's Day Care Hysterectomy technique and procedure, we have been able to ease the pain and shorten the recovery time to the extent that the patient gets admitted to the hospital in the morning, undergoes the surgery, and in the same evening, is comfortable enough to be discharged from the hospital to go home.

Methods

Day Care Hysterectomy is a technique which involves making multiple small changes in the surgical protocols and principles of doing a laparoscopic hysterectomy. These changes together give the end result of a comfortable, pain free recovery for the patient. It allows the patients to be discharged from the hospital within 6-8 hours of the surgery. The surgical steps for laparoscopic hysterectomy have been modified in such a way that they give minimal tissue trauma and minimum blood loss during the surgery.

Surgically, the main step which has been modified is the skeletonization of the uterine artery while doing the hysterectomy. The uterine artery is the main blood supply to the uterus. Separating the bladder pillar anteriorly to the uterine artery and the posterior leaf of the broad ligament behind the uterine artery allows the dissection to be completed well enough to skeletonize the uterine artery area where it enters into the uterus. This separation allows the cauterization or the desiccation of the uterine artery with any energy source. A simple bipolar cautery machine or a vessel sealer device or a ultrasonic energy source. Separating the uterine artery effectively is the key to be able to do a good laparoscopic hysterectomy.

Results

Dr Modi's Day Care Hysterectomy technique includes changes in the surgical and the anaesthesia protocols which together give the end result of a comfortable, pain free recovery for the patient. It allows the patients to be discharged from the hospital within 6-8 hours of the surgery.

Conclusions

This is a simple technique based on making small changes to the multiple protocols while doing a laparoscopic hysterectomy, which can be easily replicable. The end result of a comfortable, pain free surgery makes it highly acceptable to the patient.

<https://player.vimeo.com/video/272623144?autoplay=1>

Dr Modi's tubal recanalisation technique

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Background

Tubal recanalisation is a delicate surgery which requires smaller laparoscopic instruments for delicate tissue handling. Lesser the tissue handling, better is the surgical outcome. Minimal tissue trauma and finer suture material also contribute to better results.

Methods

1. Laparoscopic instruments devised as Dr Modi's Recanalisation Set of instruments. 5mm standard laparoscopic instruments with 3mm tips.
2. Vasopressin diluted in saline used in the broad ligament prevents bleeding and thereby prevents the use of any energy source.
3. Tubal approximation done by only three stitches on the refreshed tubal edges. These are placed at 6 - 10 - 2 O clock positions. Minimal suturing allows minimal tissue handling and lesser trauma.

Results

Higher tubal patency rates are achieved by Dr. Modi's Recanalisation Technique. HSG showed 90 % patency rates after three months of the procedure. Avoiding the use of energy source allows better healing of the tubes.

Conclusions

A simple technique of approximation the tubes, with minimal tissue handling and minimal tissue trauma, resulting in higher tubal patency rates.

<https://player.vimeo.com/video/272626960?autoplay=1>

Free Communications 5 | Fibroids | Laparoscopy

Twisted ovarian cyst - saving the ovary

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Background

Twisted ovarian cyst is more common in younger females, where fertility is still desired. Laparoscopic management should be to conserve the ovary. It requires the cystectomy to be done adequately, and the ovary to be anchored, thereby preventing the recurrence of torsion.

Methods

The twisted ovarian cyst may appear to be necrotic and non viable in the first appearance. It can still be untwisted. The cyst, if large, then cystectomy may be done. Slightly difficult to do the cystectomy as the entire ovarian tissue may be friable.

The ovary then is anchored to the ovarian fossa with a stitch.

Contralateral ovary also to be anchored prophylactically.

Results

Untwisting and conserving the ovary allows the ovarian function to return back after the healing is completed. This is easily documented by ultrasound showing the follicles developing during the ovulatory cycle. Oophorectomy should not be done, irrespective of how bad the appearance of the ovary is.

Conclusions

Most of the untwisted ovaries respond favourably with normal functioning. Only twice we have faced the issue of premature ovarian failure after the untwisting. The ovaries functioned for two years and then went into failure. Even this temporary functioning justifies the principle of conserving the twisted ovaries.

<https://player.vimeo.com/video/272640797?autoplay=1>

Free Communications 5 | Fibroids | Laparoscopy

Interstitial pregnancy: cornual laparoscopic resection with Endoloop technique

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Background

An interstitial pregnancy is implanted in the interstitial portion of the fallopian tube. It is an uncommon type of ectopic pregnancy and it comprises about 2 to 3 percent of all ectopic pregnancies. Its unique anatomic location makes its early diagnosis challenging. There is no clear consensus regarding its optimal management.

Methods

The authors report a case of an interstitial pregnancy in a 25-year-old healthy nulliparous woman with eight weeks of amenorrhea. She presented with mild pelvic pain and moderate vaginal bleeding. The physical examination was otherwise normal. The transvaginal ultrasound revealed a bulky uterus with an empty cavity, and a 40 mm mass proximal to the left uterine horn with a central gestational sac. We performed a laparoscopy that confirmed the diagnosis of a left interstitial pregnancy.

Results

The left fallopian tube was cauterized and transected distal to the ectopic pregnancy. We then placed an Endoloop® ligature under the mass on the uterine side and resected the mass with the surrounding myometrium. The surgical specimen was removed inside an Endobag™. There were no major intra or postoperative complications.

Conclusions

Interstitial pregnancy remains a challenging condition. The index of suspicion should be high and early diagnosis and institution of treatment are critical. In women who desire to preserve fertility and are hemodynamically stable, laparoscopy has become the gold standard approach. Cornual laparoscopic resection with Endoloop® technique seems a safe and effective option as it permits both an adequate hemostasis and uterine wall closure.

Free Communications 5 | Fibroids | Laparoscopy

Lost intrauterine device - laparoscopic approach

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Background

Intrauterine devices (IUDs) are highly effective long-acting reversible contraceptive devices.

Uterine perforation and extrusion of the IUD into the peritoneal cavity are rare, occurring once in every 1000 insertions, and significant illness or injury related to intraabdominal IUD location is unusual. Most perforations occur at the time of IUD insertion and are asymptomatic.

An extrauterine IUD may be free floating in the abdomen or pelvis or adherent to abdominopelvic structures.

Methods

The authors present a video case report of a healthy 25-year-old woman, body mass index 23 Kg/m², gravida 1, para 1 (vaginal delivery), who was referred to our outpatient clinic due to nonvisualized IUD strings.

It was a levonogestrel IUD that had been inserted one month postpartum in a primary health care center and the time from insertion to mislocation diagnosis was 12 months.

She was asymptomatic, and the gynecological examination was otherwise normal.

Results

The pelvic ultranography showed no IUD in intrauterine location. We then obtained an abdominopelvic X-ray which denoted the presence of IUD within the pelvic cavity.

We performed a diagnostic laparoscopy which revealed normal uterus and adnexa and the presence of IUD within the right broad ligament. There were gross pelvic varicose veins.

We opened the posterior aspect of the peritoneum of the right broad ligament, then we individualized IUD's central rod followed by its traction and removal.

There were no intra or postoperative complications. **Conclusions**

One of the main risk factors for uterine perforation while inserting an IUD is insertion during the lactation period, as it occurred in our case. Despite its location within the broad ligament, our patient had no symptoms, leading to a late diagnosis. The preferred approach is surgical removal by laparoscopy as it is minimally invasive and has a high success rate.

Free Communications 6

ES27-0404

Free Communications 6 | Training | Laparoscopy

Time isn't everything: teaching surgery and maintaining productivity

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Background

Many European health care systems find themselves under pressure to increase service provision whilst attempting to maintain high quality training. There is concern amongst trainees that increased service demand will erode their opportunities for training. This issue can be difficult as much of the evidence is anecdotal and varies significantly between training centres.

As a means of investigating this issue we have taken surgery for Ectopic Pregnancy as a "Barometer" for training opportunities being offered to Gynaecology doctors at the Royal Infirmary of Edinburgh.

Surgical management of ectopic pregnancy is a core element of gynaecology training and should present an excellent training and teaching opportunity in most cases.

By auditing these surgical cases we hope to bring evidence to the table that operations performed by gynaecologists in training do not impact on service provision, time in theatre and by proxy do not impact on patient safety.

Methods

Royal Infirmary of Edinburgh theatre log books (paper and electronic) from all theatres where surgery for ectopic pregnancy takes place were exhaustively searched for cases. Operations for ectopic pregnancy were identified and anonymised data were extracted and patient hospital records then searched for additional clinical data. The following data were analysed: total number of cases; total theatre time (anaesthetic time plus surgical time); time of day operation commenced and grade of principal operator(s)

Results

There were 64 emergency procedures for ectopic pregnancy across all theatres in 2017. The mean time for these procedures was 83 minutes (Standard Deviation, 35 mins).

Of the 47 procedures where the principal operator was a consultant the mean theatre time for these cases was 85 minutes (Standard Deviation, 35 mins). In 17 cases where the principal operator was a gynaecologist in training the mean theatre time for these cases was 79 minutes (Standard Deviation, 35 mins).

Fifteen percent (n=10) of the cases were performed "out of hours" (cases started at any time after of 8 p.m.). Of these cases only two were performed by a gynaecologist in training.

Conclusions

Average theatre time for operations performed by gynaecologists in training compared to consultants were comparable, with a similarly large standard deviation. This suggests that there is no additional impact on theatre time when a consultant decides that it is appropriate for a gynaecologist in training to operate.

Two thirds of these operations are being carried out with consultants as the primary surgeons both during the day and overnight. There will obviously be cases where consultant expertise are required due to technical difficulty, however these data support gynaecologists in training being the primary operators at no detriment to the hospital in terms of service provision.

Reducing the myoma size with cold knife before colpotomy retrieval

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Background

The purpose is to present the demonstration of reducing the size of large myoma by changing its form to snake shape with using laparoscopic cold knife for facilitate the removal of the specimen through posterior colpotomy.

Methods

A 29 years old woman refers to our clinic with complaint of abnormal uterine bleeding and pelvic pain. Transabdominal ultrasonography revealed 8 cm uterine leiomyoma with normal ovaries. Serum levels of tumour marker antigens were in normal range. Overall, the laparoscopic surgery was decided. After myoma enucleation and re-approximation of the uterine defect, myoma was cut in vertical axis, one third of the one edge without reaching the opposite site than, it was incised in vertical axis, two third of the same edge starting from the controversial site without reaching the opposite site with laparoscopic scalpel. At the final step, it was cut in longitudinal axis without reaching the opposite site. By using this incision technique, large myoma in a round form was taken a shape of snake when the myoma was opened in its longitudinal axis. After performing a posterior colpotomy, the laparoscopic bag was inserted and the myoma was placed in it. Thereafter, the edges of the bag were exteriorized around the introitus. The one edge of the myoma is grasped and retrieved easily without manual morcellation in the vagina.

Results

With this technique, large myoma which requires manual morcellation into the vagina, comes in to a snake shape thus, removal of the large myoma is really facilitated.

Conclusions

Getting myomas to snake shape for tissue extraction instead of manual vaginal morcellation which is time consuming and causes anxiety, should be kept in mind in appropriate patients.

<https://player.vimeo.com/video/269402600?autoplay=1>

Free Communications 6 | Training | Laparoscopy

Learning curve for high pressure entry technique, risk factors for failure - one trainee one mentor experience in a University Hospital center

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Background

defining a learning curve for laparoscopic procedures is a complex process; however, the identification of the number of cases necessary to achieve competence is a crucial factor. It is also an important aspect of quality assurance in patient care.

Methods

It is a cross-sectional study and has been done in Frankfurt university hospital. The patients who had undergone laparoscopy by trainee have been included in this study. The patients after midline laparotomy needing entrance in palmer point have been excluded. The risk factor for unsuccessful entry with high pressure technique in the learning curve has been evaluated. A successful entry has been defined as follows: a Veress needle is grasped, the lower anterior abdominal wall is elevated The Veress tip is then inserted at a right angle to the anterior abdominal wall (umbilical region) with high pressure of CO₂ 20 mmHg. After establishment of pneumoperitoneum to 20 mm Hg, insertion of a trocar is performed in the deepest part of the umbilicus without elevation of the anterior abdominal wall.

Results

the trainee has learned this technique in 53 cases with presence of mentor, mentor has decided to take over this part of operation in 3(6%) patients after second unsuccessful try to produce pneumoperitonem .The trainee has started to do laparoscopy independently after finishing her residency program and until being certified as laparoscopic surgeon (MIC II certified in Germany) she has done 373 laparoscopic entrance with this technique. In the series of 373 patients: 2 cases of change to open laparoscopy because of extraperitoneal insufflations (both of the patients with BMI over 30), subcutaneous emphysema in 10 cases and Pneumo-omentum in 15 cases. All this events except 2 cases with Pneumo-Omentum, were in the first 100 cases. There was no vessel or organ injury in this group of patients. From 23 cases with subcutaneous emphysema and Pnemo-omentum 10 cases were with BMI over 30 and 13 cases have had tight skin and tissue which made the elevating of abdominal wall difficult.

Conclusions

The learning curve, in addition to being a function of the surgeon's understanding of the new technique, is improvements in support staff and peri-operative care. In high flow/pressure technique the risk factor for unsuccessful entry is the experience of the surgeon, high BMI of the patients and tight skin and tissues of the patients. Previous operation is not a risk factor. The first 100 cases that one does independently has a high risk of failure rate.

Free Communications 6 | Training | Laparoscopy

Novel €2.00 Laparoscopic Trainer, constructed from day-to-day materials. Trialled in a laparoscopic workshop in Uganda

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Background

The use of laparoscopic surgery is well established in more economically developed countries and is the gold standard for the majority of gynaecological surgery. In most parts of Africa, however, laparoscopic surgery is not readily accessible. With the medical community becoming a global entity, it is inevitable that laparoscopic procedures and equipment become more available worldwide. In order to stay up-to-date with gold standard practice, an early introduction to laparoscopic surgery is essential.

In February 2018, our team travelled to a district general hospital, with over 6,500 births per year, in Hoima, Uganda on a mission to assist and train the local Obstetrics and Gynaecology team. The benefits of laparoscopic trainers are well established, however, the majority are simply unaffordable to the medical community in Uganda. Our aim was to introduce the basic principles of laparoscopic surgery and design an affordable, user-friendly laparoscopic trainer.

Methods

We designed an inexpensive and easy-to-construct laparoscopic trainer (LT). The total cost of one pelvic trainer is £1.50. The base of our LT was constructed from a wooden cheese board purchased online for £1. The bridge of the LT was made from cardboard used as packaging for a pair of socks from a high-street retailer. Two pieces of cardboard were glued perpendicular to the base. The third piece was then glued horizontally at a slight open angle to the two vertical pieces. We have utilised packaging from socks but any solid recycled cardboard can be used. Finally, a sponge, at the cost of 50p, was glued at the distal end of the board. The camera from a mobile phone was used when practicing on the pelvic trainer.

During the project, we hosted two workshops. Participants were able to use the LT and become accustomed to simple manoeuvres, including basic suturing. Participants gave feedback on their experience following the workshops.

Due to such positive feedback, three LTs were donated for teaching purposes to the hospital.

Results

Although none of the participants had experience in laparoscopy before, the level of attendance and interest was overwhelming – all were exceptionally eager to engage and learn on the LTs.

The feedback that we received was incredible - one participant mentioned that his dream had come true when he was given his own laparoscopic trainer.

Conclusions

The drive towards minimally invasive surgery is global and will inevitably be readily available worldwide. It is, therefore, imperative to support and teach our Ugandan colleagues. We have demonstrated that training in laparoscopic surgery does not have to be expensive and can be easily achievable with the use of novel design and readily obtainable materials.

Free Communications 6 | Training | Laparoscopy

Novel approach to training in minimally invasive gynaecological surgery; using wet lab pig's liver and gallbladder

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Background

We are presenting a wet lab model of pig's liver and gallbladder. This model allows simulation of laparoscopic dissection often necessary in ovarian cystectomy, endometriosis surgery or pelvic adhesions. The pelvic structures such as bowel or ureters are in close proximity to gynaecological organs and often are adherent to them. The skills necessary to perform laparoscopic dissection without causing organ injury are acquired to a great extent by using our wet lab model.

Methods

We are using pig's liver with gallbladder in situ cleaned and trimmed to isolate gallbladder onto its liver bed. The specimen is then placed inside a laparoscopic training box and full size laparoscopic instruments are used for training. The goal is to dissect the gallbladder off the liver bed without puncturing the gallbladder using atraumatic laparoscopic graspers and scissors.

Results

The model allows training in identifying dissection planes by exerting gentle tissue traction and countertraction. The use of laparoscopic scissors would allow further opening and separation of tissue planes. The model is particularly useful in re-creating instances where dissection is particularly difficult due to adhesions. Tissue feedback comes close to real life situations, unique to gallbladder (cystic structure) attached to liver bed (solid organ). Important skills can be acquired such as adequate tissue tension, use of laparoscopic scissors to incise and dissect tissue planes and excision of cyst intact through coordinated fine movements.

Conclusions

This wet lab training model is essential in developing, maintaining and enhancing intermediate to advanced laparoscopic operating skills. These skills are applicable to a wide range of gynaecological minimally invasive procedures amongst which endometriosis surgery, surgery after pelvic infection with significant pelvic organs adhesions, cystectomy and endometriomas.

<https://player.vimeo.com/video/269966746?autoplay=1>

Free Communications 6 | Training | Laparoscopy

Ancillary laparoscopic port placement: a survey of handling techniques amongst trainees and consultants at the University Hospital of Wales.

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Background

There are many publications regarding optimal port site and injury during laparoscopic port placement, however little exists describing the safest method of port handling during port insertion, particularly ancillary ports. With over half of all laparoscopic injuries occurring at port introduction, we conducted a survey amongst gynaecologists at a large university teaching hospital to assess variation in technique and to determine whether a standardised method is being taught.

Methods

25 participants of varying experience were randomly selected to complete a survey gauging experience of laparoscopic port placement. They were asked to hold a 5mm single-use port in their dominant hand, as if inserting an ancillary port during standard laparoscopy. Photographs were taken of the hand position, grip of the port and the angle of insertion in relation to the abdominal wall on a simulator.

Results

There was good range of experience across all levels of training. 88% had attended the RCOG basic surgical skills course and 44% had completed an advanced laparoscopic skills course. 96% had prior experience of inserting laparoscopic ports with 68% independent operators following formal accreditation of competence. 88% felt safe at inserting ancillary ports, however 80% reported no formal teaching specifically on safe or optimal port handling. On review of technique, despite low reported rates of training, 88% held the port with the same hand position and grip, however 28% did not enter perpendicularly to the skin. 2 participants additionally used their non-dominant hand to further stabilise the port.

Conclusions

This basic study has highlighted the need for further research into ancillary port handling and incorporation of standardised approved methods into current training. If a consistent and validated approach is adopted this may improve patient safety and reduce laparoscopic port related injuries.

Free Communications 6 | Training | Laparoscopy

A national survey of neuropraxic nerve injuries amongst gynaecologists following conventional laparoscopic surgery

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Background

Conventional laparoscopy can lead to repetitive strain injuries affecting both the surgeon and assistant and is associated with poor ergonomics and equipment. Studies have reported the majority of surgeons within the study experiencing repetitive strain and musculoskeletal injuries, especially affecting the neck, back, shoulders and thumbs. Laparoscopic instrument handles have also been associated with inducing pressure points, nerve impingement and difficulty with ease of instrumentation due to the size and design. These complications have been associated with high case loads and lengthy procedures. The incidence of nerve lesions and neuropraxia amongst laparoscopic surgeons is under-reported.

Methods

An electronic survey using "survey monkey" was distributed to the email accounts of all gynaecology Consultants and registrars within Wales. The survey was a multiple choice format with a free text available for each question.

Results

The survey assessed the surgeons demographics including age, dominant hand, special interest and glove size. The average week's caseload was documented and the number of laparoscopic cases per week with an average length of time per case recorded. The typical type of operation performed was assessed including degree of complexity.

Physical symptoms was assessed included previous history of neuropraxic injury, location of injury and the nature of how the injury occurred. The length of time the injury impacted the surgeon was recorded and whether the injury recurred.

The surgeon's choice of surgical instruments was questioned, and whether physical discomfort whilst handling instruments occurred and to which specific area of the hand.

The knowledge and application of ergonomics along with occupational health input was explored within the survey.

Conclusions

Optimising ergonomics within the laparoscopic operating room is paramount to keep the surgeon and assistant efficient and pain free. Neuropraxic nerve injuries secondary to laparoscopy are under-reported. Care should be taken when designing laparoscopic handles to avoid pressure areas and nerve injuries during operative laparoscopy.

Free Communications 6 | Training | Laparoscopy

Feedback: trainee versus consultant perspective of trainee performance in gynaecology operating

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Background

Feedback has gained increasing recognition in its role in adult learning. Kolb (1984) proposed that learning by doing (e.g surgical skills teaching) occurs in a circular fashion (Kolb Cycle) and that this type of learning can take place at any time and at any point of the cycle. In the experimental learning theory research, feedback is critical for the learner's progression from novice through to expert.

The aim of this project was to assess whether there was a disparity in consultant versus trainee perception of the trainee's surgical performance in theatre. The long-term aim is to establish an enhanced and more structured feedback system to surgical trainees in order to improve confidence and competence for surgical skills.

Methods

We used prospective data collection asking trainees and consultants to individually fill out a paired anonymous feedback form on the trainee's performance in theatre on a case by case basis. Performance was based over 4 domains: safety, efficiency, technical skill and overall performance. A 10cm blank visual analogue scale was used from *worst possible* to *best possible*, where both trainee and consultants were asked to mark a point on the scale to give their performance rating along the line. These were then compared to assess if the teacher's perception was similar to the students. Other information included trainee grade, which part of the procedure was undertaken by the trainee, and if feedback was given in pre-operative or post-operative planning.

Results

In total 21 cases were compared. The case mix included a variety of operations and included a skill mix of junior to very experienced trainees. Most common operations included: diagnostic hysteroscopy, laparoscopic treatment endometriosis/ adhesions/ cysts, and total laparoscopic hysterectomy. In all 4 domains, trainee perception was persistently lower than that of consultant perception bar one case. In terms of safety, there was a 0.5 (range 0-2) mean difference on trainees versus consultant feedback. In the efficiency category, there was a mean difference of 1.3 (range 0-5.) Technical skill was found to have a mean difference of 1.5 (range 0-3), whilst the overall performance was found to have a mean difference of 1.5 (range 0-4.)

Out of all 21 cases pre-operative planning for the trainee (ie what was the trainee planning to achieve in this procedure?) was given in 33% (7 cases), whilst 66% had no pre-operative planning. Post-operatively 66% (14 cases) of trainees received some form of structured feedback.

Conclusions

As can be seen from our findings above, there is a persistent discrepancy where trainees are underestimating their performance in theatre. This is most profoundly seen in technical skill and overall performance. We aim to now provide a structured feedback system in the hope to accelerate adult learning in surgical training.

Free Communications 6 | Training | Laparoscopy

Techniques to avoid ureteral injury in total laparoscopic hysterectomy

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Background

One of the severe complications of a total laparoscopic hysterectomy (TLH) is a ureteral injury. The previous literature reports the incidence of a ureteral injury being 1-15% of TLH cases. The points where the injury is likely to occur include at the time of hemostasis before identifying the position of ureter, at the time of cutting a cardinal ligament and at the time of closing the vaginal vault. In our institute, we are carrying out three-stage techniques to avoid a ureteral injury in TLH. The aim of this study is to demonstrate the effectiveness of our techniques in avoiding a ureteral injury.

Methods

The first stage is to open up the Okabayashi's pararectal space (a space between posterior leaf of the broad ligament and a ureteral leaf) sufficiently and separate the ureter outside from the posterior leaf of the broad ligament by following the course of the ureter to a ureter tunnel. The second stage is to create enough space between the cutting section and the ureter by inserting the forceps to hold the cardinal ligament in order to have the ureter under a direct vision when cutting the cardinal ligament. The final stage is to inject some indigo carmine intravenously and observe the absence of intraperitoneal leakage of indigo carmine as well as the emission of indigo carmine from both sides of the ureteral orifices by a cystoscope after closing the vaginal vault following TLH.

Results

The above-mentioned three-stage techniques were carried out in 242 patients who underwent TLH in our institute between July 2012 and April 2018. There was no ureteral injury during or after TLH.

Conclusions

Although ureteral injury is one of the most severe complications in TLH, it can be avoided. The techniques we have developed can be useful in performing TLH safely.

<https://player.vimeo.com/video/269647221?autoplay=1>

Wet lab nephrectomy in a rabbit specimen; uses in operative gynaecological training

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Background

We are presenting a wet lab model of rabbit with kidneys in situ devoid of the rest of internal organs. The model is easily reproducible and allows training of specific skills needed for gynaecological laparoscopic surgery.

Methods

We are using an adult rabbit specifically prepared for medical use by removing skin and all internal organs, leaving kidneys and ureters in situ. The specimen is then placed inside a laparoscopic training box and full size laparoscopic instruments are used. The training goal is to dissect the kidneys off the peri-renal fat and the vascular pedicle along with ureter.

Results

The model allows training in fine dissection using laparoscopic scissors and atraumatic graspers to create necessary tissue tension.

The model is particularly useful in simulating the tissue feedback encountered in live surgery and identifying and dissecting tissue planes, sparing vital structures such as vascular pedicles.

Skills such as hand-eye coordination, coordinated fine movements using an assistant, recognition of different degree of tension that should be applied on organs so that vital pedicles are spared are all facilitated by our wet lab model.

Conclusions

Our wet lab training model is paramount in maintaining and enhancing operative laparoscopic skills in gynaecology. These skills are applicable to a wide range of gynaecological minimally invasive procedures amongst which salpingectomy, bladder dissection at laparoscopic hysterectomy, adhesiolysis, endometriosis surgery.

<https://player.vimeo.com/video/272660749?autoplay=1>

PhD Thesis Abstract

Training entry in laparoscopy: state-of-the-art, development and validation of a box-trainer

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Background

Despite 50% of complications during laparoscopy are related to entry this is the least trained skill compared with camera navigation, hand-eye coordination, bimanual coordination and suturing. *Aims:* To assess the state-of-the-art of training entry in laparoscopy and to develop and validate a new box-trainer.

Methods

A) A systematic review was performed following the PRISMA guidelines on models for entry training outside the operating room, using the query [(simulation or training) and (laparoscopy or laparoscopic) and (entry or port placement or trocar placement)]; **B)** A survey was sent to the faculty of the 26th annual congress of the ESGE to evaluate practice and opinion about entry training by experts; **C)** A survey was sent to the Portuguese Obstetrics-Gynecology residents to assess education on laparoscopy including entry; **D)** A box-trainer for laparoscopic entry training will be developed and validated.

Results

A) The literature search returned 66 articles. Fifty-four were excluded after abstract reading and 6 after full text reading. The final six selected articles referred training on: an immersive virtual reality based training system, pigs, cadaver *versus* pigs, box-trainer and two bench-top simulators. **B)** The response rate of the survey among experts was 78/267. Of the 69 respondents that perform ESGE Level IV procedures, the first time they had placed a trocar was on a patient (77%), an animal (13%) or an inanimate model (10%). Ninety-four percent teach entry, however comparing to the other laparoscopic skills entry was the least taught skill. Eighty-four percent agreed-strongly agree that entry should be trained before practicing on a patient, 72% referred that entry training should ideally be performed on an inanimate model, 74% on a pig or sheep and 56% on a cadaver. Eighty-four percent did not know any inanimate model; two respondents referred their homemade model and two other referred a box-trainer. **C)** Data from 114 residents (response rate 47%) evidenced that the first time they had placed a trocar was on a patient (84%), inanimate model (14%) or animal (2%). Minor complications related with entry were reported by 64% of them. GESEA certification was known by 79% and 14% were already certified for bachelor level. **D)** The development and validation of a box-trainer to train and assess entry is underway.

Conclusions

Our project, although based on small studies, has consistently evidenced that there is a shortage of entry training models in laparoscopy. It also evidenced that training remains poor, as to both experts and residents. This is an important pitfall of laparoscopy, not only as to both experts and residents, but also according to the persistent high level of complications related to entry, which remains similar during the last 25 years. The development and validation of new entry training models is warranted.

Free Communications 6 | Training | Laparoscopy

PhD Thesis Abstract

Virtual Human Atlas project

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Background

The "VHA PROJECT" consists of a digital immersive ecosystem and is dedicated to Science, Applied Teaching and High Profile Training in the medical scope.

The main distinctive element of the experience offered by VHAP is the chance for the user to access a multilevel virtualized structure, that allows students, medical staff, teachers and the entire medical technical sector to explore, interact and verify with centralized tests their specific knowledge of human anatomy, its functioning and its pathologies.

Methods

The experience offered by VHAP is possible by the use of advanced VHAP Stations, perfectly equipped with interactive viewers and controls. Acting within a three-dimensional space designed in computer graphics and balanced on the nature of the required experience, the user is able to fully explore the anatomic complexity of the human body, learn and investigate all the related functions and subsystems, engage with pathologic status and solve it with dedicated tools and techniques.

The VR Station is the technological hub of the entire VHAP ecosystem. It consists, in its main parts, of a logical unit Windows PC, a Visor, one or two Gloves / Knobs for interaction with the hands, a pair of headphones and a comfortable seat for the user.

Results

The advantages of a virtual space, now that the technologies are ready to offer a deep complexity of the simulated scenarios, mediated by an increasingly engaging interactive component, allow an understanding of the shown modules more efficient, as the training paradigm shifts from the traditional visualization of objects and procedures to the futuristic interaction with an immersive experiential Matrix.

Considering the particular nature of the experience, the guarantee of anatomical adherence is borrowed from an intersection of possible sources and theories elaborated by scholars, professors, teachers and experts.

A series of simulated scenarios will be implemented in line with the resolution of problems typical of the medical field. For each scenario, the academical reference for this section will clearly indicate the nature of the problem to be reproduced and its solutions, integrating a series of successive procedural steps, with different degrees of error / omission, to be recreated in the virtual space to test the user. The medical tools, machinery and setting up of the simulated scenario will be the object of an adequate analysis in order to correctly recreate all the variables involved.

Conclusions

Virtual reality can provide an experience to students, medical staff, teachers and the entire medical technical sector to explore, interact and verify their specific knowledge of human anatomy, its functioning and its pathologies.

Free Communications 7

ES27-0096 -

Free Communications 7 | Laparoscopy

Clinical-morphological peculiarities of laparoscopic ovarian drilling with using different energies

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Background

Comparative evaluation of the effectiveness of laparoscopic ovarian drilling (LOD) in CC-resistant (clomiphene citrate -resistant) PCOS woman with using different type of energies showed that more gentle and effective is using laser (Ho-Yag –holmium) compared to other types of energy. Our aim was to assess the functional and morphological status of ovaries under the influence of different types of energies using during laparoscopic ovarian drilling , to analyze clinical outcomes after these types of intervention.

Methods

Women of reproductive age with CC-resistant forms of PCOS underwent LOD with using different energies, 110 patients underwent Ho-Yag laser drilling (HLD), 69 patients underwent laparoscopic ovarian diathermy with using bipolar (LOD), 72 patients underwent laparoscopic ovarian resection (LOR). Morphological examination of ovarian tissue after exposure of the above mentioned kinds of energy was carried out. The material for the study was obtained after hysterectomy with appendages according to indications with informed consent of the patient.

Results

Our findings showed the high efficiency of using Ho-yag drilling like the most gentle according to the ovarian reserve, and more effective comparative to the other methods. Morphological examination showed the minimal damage of tissue after performing of the holmium laser, with a powerful local ablation of the ovarian tissue, there is no carbonization and burns of tissue, which are inherent to the electrical energy. Significantly less focuses of hemorrhage and coagulative necrosis. Morphological features of ovarian tissue underwent of different energies positively correlated with the clinical efficiency of performed methods. Menstrual - ovulatory function was resumed by 96.4 % in women of group HLD, 84,1 % in the group LOD and 70.8% with in group LOR. During the first year, after endosurgical treatment pregnancy occurred in 59 (53,6%) women from the HLD group, which exceeded this figure in comparison with other methods – in 2,5-3 times.

Conclusions

Consequently, the most effective method of laparoscopic ovarian drilling is Ho-Yag laser drilling.

Free Communications 7 | Laparoscopy

Vascular complication during laparoscopic pelvic surgery - injury to inferior epigastric artery

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Background

Vascular Complications during laparoscopic pelvic surgery- Injury to inferior epigastric artery (IEA)

- Incidence: Accounts for 2% of all laparoscopic complications
- Degree of injury :Vary from superficial bruising to life threatening haemorrhage/haematoma (Image)
- Location: Inferior Epigastric Artery (IEA) anatomically located lateral to obliterated umbilical arteries on anterior abdominal wall.

Methods

- Presented video is of a patient with severe endometriosis.
- During suspension of ovaries the needle went through right inferior epigastric artery (IEA)
- It was recognised immediately by observing blood dripping profusely at the site of injury and subsequently a haematoma.
- In literature a number of techniques has been described to manage intractable bleeding from IEA.
- Initially a tamponade was applied with laparoscopic forceps .
- A modified straight ligature carrier –Endoclose was used for applying haemostatic sutures.
- Two sutures were placed inferior and right angle to the IEA using vicryl 1 under direct vision to stop the active bleeding.

(Followed by Video)

Results

- Bleeding stopped and haematoma observed with serial full blood count.
- A moderate size haematoma was monitored clinically and with serial FBC.
- Patient was discharged home after 24 hour with stitched in situ. She returned 48 hours later and stitches were removed in outpatient with no complication.

Conclusions

Aim of this presentation is to raise the awareness of the anatomical variations of the course of the IEA in relation to abdominal landmarks in order to define a safer zone for laparoscopic surgery on anterior abdominal wall.

This easily correctable injury would not be missed by early recognition of the injury and the use of prudent surgical techniques.

This video has described an important surgical technique to manage the IEA injury with no associated morbidity

<https://player.vimeo.com/video/272962721?autoplay=1>

Free Communications 7 | Laparoscopy

Laparoscopic excision of uterosacral ligament and rectovaginal endometriotic nodule

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Background

This is the case of a 30 year old patient with dysmenorrhoea, LIF pain, dyspareunia and menstrual dyschezia.

Laparoscopy demonstrated a 3 cm left endometrioma and a 2 cm central endometriotic nodule obliterating the POD and involving the Lt USL, torus uterinus and posterior vaginal fornix. The rectosigmoid was pulled into the nodule.

Methods

A systematic approach is followed. Surgery begins with adhesiolysis and division of the physiological sigmoid colon adhesions at the pelvic brim. The endometrioma is drained (not shown) and the ovary suspended from the anterior abdominal wall to improve access to the pelvis and appropriate use of the assistant.

The pelvic side wall is opened at an area of healthy peritoneum and the Lt ureter is dissected laterally. The pararectal spaces are opened with blunt divergent movements. The dissection starts in normal tissue close to the nodule and extends caudally until normal tissue below the nodule is reached. Dissection follows the gas of the pneumoperitoneum in the avascular planes. The rectum is dissected off the nodule with cold scissors and short bursts of bipolar energy to avoid thermal injury to the bowel. Vaginal and rectal examination during the dissection assists in identifying the correct plane.

The USL endometriosis is dissected medially in continuum with the rectovaginal nodule. The pelvic splanchnic nerves are preserved caudally to the USL.

The nodule is excised en bloc with excision of the affected vaginal mucosa and the vaginal wall closed with Vicryl sutures.

Results

The patient made an uncomplicated recovery and histology confirmed endometriosis. At 6 months post operatively she has got complete resolution of her symptoms.

Conclusions

Laparoscopic excision of rectovaginal endometriosis is challenging and requires a systematic approach for complete identification of the pelvic anatomy. The aim is to completely excise the disease in order to maximise the surgical outcome and improvement of symptoms.

Free Communications 7 | Laparoscopy

Laparoscopic hysterectomy with vaginal morcellation in a patient with large intraligamentary myomas

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Background

A 50-year-old patient with a complaint of abdominal pain had a transvaginal USG of approximately 20 cm myoma adjacent to the left lateral wall of the uterus. Laparoscopic hysterectomy was considered due to the fact that the patient had a body mass index of 38, type 1 diabetes mellitus and hypertension.

Methods

1 umbilical 10 mm trockhar (li-yuang point) 2 inguinal 5 mm trochar and 1 suprapubic 5 mm trochar were studied. Myom was removed from the vagina after being uterus separated

Results

Postoperative material was measured to 825 gr. The patient was discharged healthily on the 2nd postoperative day.

Conclusions

In patients with comorbid disease and high body mass index, laparoscopy may be a better option than laparotomy in terms of patient comfort and rapidity of recovery. The fact that the patient has a large mass does not constitute an obstacle for laparoscopy. Technical difficulties (no laparoscopic morcelation) are not an obstacle to laparoscopic surgery

<https://player.vimeo.com/video/268874678?autoplay=1>

Free Communications 7 | Laparoscopy

Laparoscopic management of frozen pelvis and midtubal occlusion due to pelvic tuberculosis

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Background

Tubal factor is the most important cause of female infertility that often develop secondary to pelvic inflammatory disease. Tuberculosis-related tubal factor is observed in 1% of the developed countries in the infertile population, which is up to 13% in the developing countries. Symptoms of pelvic tuberculosis include menstrual irregularities such as oligomenore-amenorrhea, infertility, chronic pelvic pain, and pelvic mass. We present patient with dysmorphic uterine cavity and midtubal occlusion who desire pregnancy.

Methods

Laparoscopy is the gold standard in the treatment of tubal factor before in vitro fertilization that includes salpingectomy or proximal tubal blockage. The patient is 29 years old and wants to be pregnant for 7 years. Dysmorphic uterine cavity and bilateral midtubal occlusion were seen on hysterosalpingography. Ultrasonography showed bilateral hydrosalphanix and tuboovarian complex. The body temperature, white blood cell count, CRP, and sedimentation were determined at normal limits. Hysteroscopic incisions was applied to the internal indentations of the lateral wall for the dysmorphic cavity. On the laparoscope, it was observed that the omentum was adhered to the front wall of the abdomen. Extensive adhesions were observed between the bowel and omentum and the uterine fundus. Frozen pelvis was formed as a result of adhesion of douglas pouch. Dissection and adhesiolysis were performed without using energy modalities as much as possible. Dissection was initiated from the left pelvic sidewall to enter the frozen pelvis and bilateral hydrosalphanix was detected. Caseous necrosis was seen in the left tubule. Bilateral salpingectomy was performed and pelvic anatomy was restored.

Results

Histopathological examination revealed caseous necrosis but no active tuberculosis was detected in the patient. Endometrium tissue was studied by polymerase chain reaction and active tuberculose was not detected. Twelve mature embryos were collected after controlled ovarian hyperstimulation. One ongoing pregnancy was achieved after 1 blastocyst transfer.

Conclusions

Severe omentum and intestinal adhesions and frozen pelvis can be seen in patients with pelvic tuberculosis. In migrants and patients in developing countries, pelvic tuberculosis should be excluded when bilateral midtubal occlusion, afebrile tuboovarian complexes are detected. Despite severe adhesions, laparoscopy is a safe and effective method.

<https://player.vimeo.com/video/270097112?autoplay=1>

Free Communications 7 | Laparoscopy

Assessment of liver function in patients treated with Ulipristal Acetate (Esmya®) in a District General Hospital

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Background

Ulipristal acetate (Esmya®) has been prescribed in Chesterfield since its introduction in 2012, for the treatment of symptoms associated with uterine fibroids. Its use was initially pre-surgical (prior to hysterectomy, myomectomy, uterine artery embolization), and subsequently also medical, in the form of repeated 12-week courses. We audited our experience and presented data on 108 patients at the RCOG World Congress in 2016. Between September 2012 and February 2018, we have treated 255 women, and have not encountered any women that developed signs or symptoms of drug induced liver injury.

The objective of this study was to assess the uptake and outcome of liver function testing (LFT) after UPA 5mg use in gynaecological patients, at the time of the temporary measures imposed on 8th February 2018 following the Pharmacovigilance Risk Assessment Committee (PRAC) review of cases of severe liver damage after UPA use.

Methods

When UPA was withdrawn in Feb 2018, 127 patients treated in the preceding two years were identified by pharmacy and the patient records audited. All patients were contacted by letter within 72 hours explaining the reasons for the withdrawal, and provided with a Helpline number for advice or to book an urgent outpatient appointment if desired, and LFT request form.

Results

60 (47%) patients responded to the offer of LFT testing, and a further 17 (13%) had LFT checked by their GP, either for UPA monitoring or for other reasons. Of these 77 cases, 71 (92%) had normal results. Those that hadn't already undergone definitive surgery (hysterectomy, myomectomy) were offered follow up appointments to discuss ongoing treatment options.

Of the six patients with abnormal test results, three had pre-existing medical conditions to account for the abnormality, one had normal results on repeat testing a month later, and two are being investigated further.

There has been no response to date in 50 patients, of whom 42 (84%) were discharged well, more than 6 months ago, having either undergone definitive surgery, been treated medically, not attended follow up or not taken the UPA. Seven (14%) patients have been discharged within 2-6 months, and one is still under review. It is assumed that patients declining LFT testing are currently well and asymptomatic and don't feel the need for further investigation.

Conclusions

No cases of severe liver damage have been identified in our population of 127 patients. Two currently undiagnosed mild abnormalities are under investigation. At the time of writing PRAC have completed their review, and it seems likely that UPA will become available again within a few months, to prescribe in women with symptomatic uterine fibroids.

Free Communications 7 | Laparoscopy

Dr Modi's aquadissection technique for bloodless myomectomy

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Background

1. Myomectomy is a surgical procedure whereby the fibroid is removed and the uterus is repaired. This is generally desired so that there can be a possibility for further conception, pregnancy and delivery. The common surgical difficulty in this procedure is that there is excessive bleeding during the surgery, which impacts the repair and the outcome. Surgical principle requires temporary reduction or cessation of blood supply to the surgical field for a short time, during which the procedure can be completed, or at least, majority of the surgical closure part of the uterus gets completed.

Dr Modi's aquadissection technique reduces the blood loss during the surgical procedure, allowing the surgeon to finish the repair comfortably. This in turn improves the post-operative outcome for the patient.

Methods

Dr Modi's Aquadissection technique is the use of a large quantity of saline with vasopressin drug added to it. 40 units of vasopressin drug is added to 400 ML of normal saline and the entire solution is injected into the myometrium of the uterus. The saline solution tends to find the path of least resistance and enters into the correct plane in between the fibroid and the uterus on its own there-by separating the fibroid significantly. Hence it is called as Aquadissection.

In addition, the blood in the myometrium (uterus) is replaced by this saline. So when the uterus is cut open, there is no bleeding and only the saline leaks out. This also keeps the surgical field clear allowing better visualisation of the surgical field. The vasopressin holds the saline in place, inside the uterus, for about half an hour because of the vasoconstriction, thereby giving enough time to finish the repair of the uterus. After half an hour the effect of the drug wear's off and the circulation is established back to normal.

Results

As an end result, the surgery is completed with very minimal blood loss, clear field of visualisation, which allows proper repair of the uterus. The significant reduction in the blood loss also enables the surgeon to operate calmly, without hurrying up in the repair, and without any undue stress.

Conclusions

Simple technique to minimise blood loss in a myomectomy.

Easily replicable by any surgeon

Principle and concept based surgical technique

Not equipment based

No special additional skill required

<https://player.vimeo.com/video/272619769?autoplay=1>

Free Communications 7 | Laparoscopy

The posterior colpotomy for tissue extraction in robotic surgery. A surgical case of a pelvic mass causing unilateral hydronephrosis

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Background

I present an interesting case of a 43y woman with a unilateral hydronephrosis and two pelvic solid mass. She underwent a vaginal hysterectomy for myomas 5 years ago. The hydronephrosis at the right side was resolved by the placement of a double JJ catheter. She underwent a robotic laparoscopy with resection of the two solid mass. After analysis it were benign myomas.

Methods

The procedure was done by robotic laparoscopy (Da Vinci Xi) and the use of 3 arms. The instruments who were used are the hot shears monopolar, the Maryland forceps bipolar and the mega needle driver. For the extraction of the tissue we used a posterior colpotomy and a endobag.

Results

Inspection of the lower abdomen shows a retroperitoneal mass at the left round ligament, at the right side this mass is at the bifurcation of the iliac artery beside the right ureter. We performed a bilateral adnexectomy and removal of the left mass. At the right side we opened the posterior peritoneum with dissection of the solid mass from the ureter. Removal of the mass by a posterior colpotomy with the use of a uterusmanipulator (Hohl, Karl Storz) and a endobag.

The total operation time was 2h with a total blood loss of 20cc. No complications occurred. The patient left the hospital the next day.

Conclusions

This is an interesting case of the removal of two myomas after hysterectomy who were situated retroperitoneal. The procedure shows very good the dissection of the right ureter. Also the feasibility for extraction of the tissue by a posterior colpotomy.

<https://player.vimeo.com/video/272620715?autoplay=1>

ES27-0132 -

Free Communications 8 | Endometriosis | Fibroids | Laparoscopy

Is magnetic resonance - transvaginal ultrasound (mri – tvus) fusion imaging useful for the assessment of deep endometriosis?

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Background

The purpose of this study is to evaluate the feasibility of fusion imaging in patients with deep endometriosis.

Methods

This prospective study included 20 patients with deep endometriosis referred to our Gynecology Unit from July 2017 to October 2017. TVUS was performed in all patients, followed by pelvic MRI and MRI-TVUS fusion imaging within three months from TVUS. An accurate description of all sites of endometriosis, adenomyosis and deep infiltrating endometriosis (DIE) was reported for each examination. The mapping obtained through fusion imaging was compared to the results of TVUS and MRI separately. Fusion exams were interpreted by two experts in gynecologic ultrasound and pelvic MRI.

Results

Mean patient age was 34.4±6.9 years (range 21.0-48.0). The most frequent symptoms were dysmenorrhea (45%), dyspareunia (35%), infertility (25%). DIE of the rectovaginal septum was identified in 5/5 (100.0%) patients at TVUS, in 1/5 (20.0%) at MRI and in 5/5 (100.0%) at fusion imaging. DIE of the parametrium was found in 100.0% (3/3) of patients at MRI, in 0.0 % (0/3) at TVUS and in 100.0% of patients at fusion imaging. Uterosacral ligament involvement was reported in 12/17 (70.5%) at TVUS, in 14/17 (82.3%) at MRI and in 17/17 (100%) through fusion imaging. DIE of torus uterinus was detected in 6/11 (54.5%) at TVUS, in 10/11 (90.9%) at MRI and through fusion imaging in 11/11 (100.0%). Both MRI and fusion detected 8/8 (100.0%) cases of DIE of the round ligaments while only 1/8 cases were seen at TVUS (12.5%). Finally TVUS spotted DIE of ureters in 2/2 (100.0%), while no cases were reported through MRI (0/2 (0.0%)) and only 1 case was found through fusion (1/2(50.0%)).

Conclusions

Fusion imaging is a new technology combining both TVUS and MRI. Although its role in daily practice has yet to be established, according to our initial results this technique may overcome the pitfalls of TVUS and MRI, offering a precise and advanced tool in the diagnosis of endometriosis, adenomyosis and DIE.

Post-menopausal episiotomy scar endometriosis case report and literature review

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Background

Endometriosis is defined by the presence of ectopic functional endometrial tissues outside the normal endometrial cavity. It could be either pelvic or extra-pelvic in location. Scar endometriosis has been described in scars of obstetric or gynaecological surgeries, most commonly caesarean section scars. Ectopic endometriotic implants, like eutopic ones are estrogen-sensitive, and show cyclic response to its varying blood levels. Menopausal state is known to lead to regression of endometriotic implants.

Only a few reports appear in literature about episiotomy scar endometriosis, whereas no reports of post-menopausal endometriosis were encountered in our literature review.

Methods

We hereby describe a case of post-menopausal episiotomy scar endometriosis, a very uncommon finding, regarding both location and persistence through the post-menopausal state.

A 54 years old lady, who has been menopausal for 3 years presented to our hospital with a complaint of persistent perineal pain of several years duration, dating back since her last delivery. She has had 3 uncomplicated vaginal deliveries, the last of which was 15 years ago. She remembers having an episiotomy at the first delivery, and trivial perineal lacerations in the 2 subsequent ones. Following her last delivery, she started complaining of perineal pain, not particularly related to menses. She has been prescribed various treatments for vaginal infections, but with no response. She was eventually told that her complaints are attributed to excessive fibrosis and scarring at the episiotomy scar, for which, she underwent surgical "release" of the episiotomy scar. She only experienced temporal relief after this procedure, but the pain recurred not long after. At our hospital, examination revealed a tender 2x3 cm mass underneath the episiotomy scar, which is fixed to the skin, but not the anal canal. Surgical excision of the mass was then performed, which was also related to the levator ani and perineal muscles. These muscles were re-enforced by delayed absorbable 2-0 polydioxone sutures, and the skin by rapidly absorbable 2-0 polyglactin.

Results

The excised tissue mass measured 2x3 cm, was fleshy displaying yellowish and reddish dots on the cut section.

Histopathological examination confirmed the presence of endometriotic tissues embedded in a dense fibrotic matrix.

Up to 9 months of post-operative follow up so far, the patient remained symptom free. Neither perineal pain nor pelvic floor dysfunction symptoms were experienced.

Conclusions

Although a quite rare condition, episiotomy scar endometriosis should be considered in women suffering persistent perineal pain, especially when in relation to a previous episiotomy scar. This possibility should still be considered even in post-menopausal ladies, along with other causes of vulvodynia.

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Ovarian Oophoropexy with ovarian ligament plication for recurrent ovarian torsion

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Background

Recurrent ovarian torsion can occur in 2-15% of cases. If left untreated and multiple operations can be required and ultimately necrosis in the ovary is a possibility.

Methods

A 23 year old woman who presented with acute left iliac fossa pain. Clinical examination was suggestive of acute ovarian torsion. She had a laparoscopy 3 weeks ago for ovarian torsion and it was de-torted at the time, in addition pelvic endometriosis was diagnosed and she was scheduled for follow up. As this was a recurrence of her torsion after counselling she opted for a laparoscopic oophoropexy with ovarian plication.

Results

This approach meant that a conservative approach could be taken for her recurrent torsion. She subsequently had no recurrence following this procedure and a repeat ultrasound demonstrated follicular activity in the ovary meaning it was still functional.

Conclusions

Ovarian oophoropexy with plication should therefore be considered in selective cases.

<https://player.vimeo.com/video/269920690?autoplay=1>

Free Communications 8 | Endometriosis | Fibroids | Laparoscopy

Abdominal ultrasound guided egg collection

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Background

To define whether abdominal ultrasound guided egg collection is feasible and effective

Methods

In 2017 and 2018, we performed abdominal ultrasound guided egg collection to total of 9 consecutive cases at tertiary referral university hospital in Ankara. Transvaginal ultrasound probe were used to prevent bowel, bladder and big vessels injuries. Continuous pressure was applied with the probe to avoid bowels and the other structures, if there are any under the procedure's area. Then all the equipment we used was same as traditional vaginal oosit pick-up procedure. The variables of the data were social demographic details of the patients, indications, total egg counts, mature oosit counts, and total number of fertilized egg. SPSS was used for statistical analysis.

Results

Mean age was 30.6 ± 2 . All women were nulliparous. Most frequent reason for abdominal ultrasound guided egg collection was virginity. The other indications are as follows; one patient was 17 years old who has been suffering from Ewing Sarcoma. Before the operation, radiotherapy and chemotherapy abdominal ultrasound guided egg collection was performed to preserve her fertility in future. The other patient was breast cancer. Two patients had huge cervical myomas, which was not possible to do oosit pick-up procedure in a traditional (vaginal) approach. Rests of the other patients' were virgin whom willing to preserve their fertility. And they were opted to have abdominal ultrasound guided egg collection. Oosit counts were as follows from each different patient; 8, 7, 2, 2, 20, 10, 5, 6, 8, 5 (n: 75) respectively. After the procedure we had mature oosits from all patients and the total numbers of mature oosit colleting and total oosit count/mature oosit ratio was 79% (59/75). We did an embryo transfer from only one patient who 6/5 (%83) mature oosits and 1/6 of them were transferred. And the other embryos were freeze.

Conclusions

Conclusion: Abdominal ultrasound guided egg collection is feasible and effective approach especially for virgin or cancer patients who are willing to preserve fertility. We planned further prospective study to determine the most efficient abdominal technic for egg collection and its results.

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The quality of online information related to fibroids: a systematic review

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Background

Fibroids are the most common pathology of the female reproductive tract, associated with significant morbidity. Health information online is rapidly expanding with minimal governance. We systematically assessed the readability, quality and accuracy of web pages providing information on fibroids.

Methods

We searched Google.com using a strategy developed in consultation with healthcare professional, researchers, and patients with fibroids. Web pages containing information related to fibroids were included. The readability, accuracy and quality of web pages was assessed using validated instruments. Readability was measured using the Flesh-Kincaid instrument. Quality was assessed using the DISCERN instrument. Fibroid-related statements were extracted, and their accuracy was assessed by expert opinion.

Results

A total of 205 web pages were identified and 48 web pages were included for analysis. Over 70% of web pages did not report the authorship and 54% did not attribute the sources of information or academic references. No web page met the suggested readability standard. The median readability score was low, suggesting a high educational level is required for comprehension. A substantial proportion of web pages was rated as poor quality. We extracted 318 statements across four domains: diagnosis, impact on fertility and pregnancy, medical management and surgical management. A large proportion of statements, were inaccurate (47, 15%) or unclear (47, 15%). Poor or very poor accuracy was identified in a significant number of web pages.

Conclusions

There are no high-quality, accurate, and easily comprehensible online web pages relating to the diagnosis and management of fibroids. Healthcare professionals must warn patients about the risk of inaccurate or outdated information found on the Internet. There is urgent need for regulation of health-related information to ensure patient safety.

Free Communications 8 | Endometriosis | Fibroids | Laparoscopy

Unknown origin of bleeding: a life-threatening situation in women affected by endometriosis

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Background

We describe a case of a 35 years old nulliparous woman who was admitted to our gynecological emergency room due to pelvic pain and fainting sensation. She had a history of endometriosis and she has been followed for 6 months by our outpatient clinics. She underwent a diagnostic laparoscopy three year before in another centre with a diagnosis of severe deep infiltrating endometriosis. Due to her severe endometriosis she was scheduled for surgery. She was not under medical therapy as she was trying to get pregnant.

Methods

At hospitalization she had blood pressure 90/60 mmHg, Cardiac frequency was 100 bpm and she presented normal body temperature. Laboratory tests showed Hb 8.9 g/dl and hGC < 0.5 UI/L. Ultrasound was performed showing abdominal bleeding and a suspicion of corpus luteum in the right ovary. Due to the rapid worsening of her clinical conditions she necessitated an immediate recovery in the operating room.

Results

During laparoscopy a big amount of blood was present at the entrance. After blood suction and difficult adhesiolysis, no bleeding from both ovaries was detected. We explored therefore the posterior surface of uterine wall where a tight adhesion between rectum and uterus was evident. In this area, a vascular lesion with huge blood flow was present. A selective coagulation was performed with good results. Specimens were collected around the bleeding area for histopathological examination revealing the presence of foci of endometriosis. After bleeding stabilization, we access to the retroperitoneum in order to allow direct visualization of the ureter and the evaluation of its aspect. About two litres of blood were removed during surgery and she was transfused with four units of blood. The patient was discharged after 5 days in good health conditions. During follow up visit after one month, the patient reported no pain and good health conditions.

Conclusions

In patients with a history of endometriosis is important to pay attention to the possible presence of uncommon bleeding localizations. Laparoscopy was useful and effective also in this challenging situation. Thanks to its magnification, we could precisely identify the bleeding source performing a good selective coagulation.

<https://player.vimeo.com/video/269953738?autoplay=1>

Free Communications 8 | Endometriosis | Fibroids | Laparoscopy

Laparoscopic Oophorectomy following Total Abdominal Hysterectomy; challenges in removing incarcerated ovary

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Background

We are presenting a case of a 37-year-old lady with a gynaecological history of Abdominal Hysterectomy and conservation of ovaries for fibroids and endometriosis. The Right ovary was found to be adherent to ureter and bowel; systematic dissection of pelvic side wall was needed to identify and restore anatomy.

Methods

Our patient had background of chronic pelvic pain and endometriosis since teenage years. Post hysterectomy symptoms of pelvic pain have subsided temporarily however pelvic pain has relapsed 2 years post hysterectomy. Clinical examination of abdomen and pelvis was unremarkable in clinic. MRI confirmed possible adhesions between bowel and vaginal vault; there were no signs of bowel obstruction on MRI.

Division of adhesions and oophorectomy was agreed with patient.

Intra operatively dissection was done using bipolar graspers and advanced bipolar diathermy along with scissors. Dissection of pelvis sidewall structures was necessary to identify the ureter and separate it from the ovary.

Results

The Left ovary was removed without difficulty.

Peritoneum was opened over the iliac vessels and dissection was extended towards bladder and upwards towards the iliac vessels bifurcation. The ureter was identified tightly adherent to the ovary; dissection planes were identified and ovary was removed.

Conclusions

There was no intra operative or post operative ureteric injury and our patient had an uneventful recovery. Symptoms of pelvic pain have subsided following surgery.

Good knowledge of pelvic sidewall anatomy is paramount in approaching dissection of incarcerated ovary, especially in patients with a background history of endometriosis.

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ES27-0282 -

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Prognostic factors for the failure of endometrial ablation: a systematic review

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Background

Endometrial ablation is a minimally invasive surgical technique which is widely used in women with heavy menstrual bleeding. Although satisfaction rates are high, about 20-25% of the patients require additional surgery, mostly because of persistent bleeding or pain. The aim of this systematic review is to provide an overview of prognostic factors predicting failure of second generation endometrial ablation. The results of this review can be used to improve the counseling of women who opt for endometrial ablation by predicting the probability of success in each individual case.

Methods

We systematically searched Medline and Embase between August 1988 and April 2018. All types of studies reporting about predictors of second endometrial ablation failure were included. Included studies were assessed on risk of bias. Data about the type of endometrial ablation, the success and/or failure rates and prognostic factors were extracted from the included studies.

Results

The literature search provided a total of 955 articles. After screening for eligibility 57 articles were included in this review. An overview was made of all described prognostic factors and the 10 most described factors have been further evaluated. These factors were; age, parity, BMI, dysmenorrhea, bleeding pattern, uterus position and length, endometrial thickness, myomas, previous cesarean section and tubal ligation. As outcome measures in the different studies were heterogeneous it was not possible to perform an analysis of pooled data, therefore an overview of the data of all studies was made. In 11 studies uterus position was analyzed, the results of these studies showed a negative effect of the retroverted uterus on the success of endometrial ablation when the thermal balloon technique was used. Tubal ligation prior to endometrial ablation was examined in 14 studies, which showed conflicting results, therefore no conclusions could be drawn from the existing evidence. Evidence about the influence of irregular bleeding, reported in 6 studies, was also conflicting, but the majority of studies showed no significant negative influence. As for caesarean section, the 9 corresponding studies showed no influence on the success of endometrial ablation. Remaining prognostic factors are yet to be analyzed and will be presented at the congress.

Conclusions

In literature many prognostic factors for the failure of endometrial ablation have been described. With this overview it is possible to improve and personalize the counseling of women with heavy menstrual bleeding.

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The role of outpatient uterine polyp morcellation in a group of women presenting with postmenopausal bleeding and coexisting morbidities.

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Background

The concept of outpatient removal of polyps has been advanced by the development of morcellation devices. We have evaluated 53 cases with an emphasis on the considerable morbidity found in women presenting with post menopausal bleeding and diagnosis of uterine polyps.

Methods

Using a Medtronic Trueclear 5mm hysteroscopic device in an outpatient setting we determined how many patients required intra procedure analgesia, the number that could be completed vaginoscopically without cervical dilation and simpler parameters such as the length of time of the procedure and the time to go home. The acceptability of this procedure to women in an outpatient scenario was also evaluated.

Results

We found many women presenting with postmenopausal bleeding also had considerable coexisting morbidities along with a significantly raised body mass index . Many of our cohort did not require any form of local analgesia or cervical dilation prior to the procedure resulting in the majority of cases having polyps removed using a vaginoscopic approach in less than 5 minutes. Pain scores measured using a VAS were found to be well within an acceptable range with many women stating they would recommend this procedure to friends and family. The majority of cases were discharged home within 30 minutes of having the procedure performed having sustained no obvious complications.

Conclusions

We conclude that the 5mm Medtronic Trueclear device has the optimum characteristics to manage this highly morbid potentially complex group of patients safely in an outpatient setting avoiding the need for general anaesthesia.

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Pregnancy outcome after hysteroscopic septoplasty

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Background

Uterine septum is the most common type of uterine anomaly that often results to infertility, abortion and poor pregnancy outcome. We present a case of a subseptate uterus with recurrent pregnancy loss and a case of complete uterine septum with secondary infertility and previous salpingostomy for unruptured tubal pregnancy. This paper reports the pregnancy outcome after hysteroscopic septoplasty with concomitant laparoscopy under ultrasound control.

Methods

2D/3D transvaginal ultrasound and ultrasound of the abdomen were taken preoperatively. The procedure was transcervical resection of uterine septum using 90° bipolar Collin's knife with concomitant laparoscopy. Post procedural evaluation of the uterine cavity was done by transrectal ultrasound. Evening primrose oil was used to soften the cervix. The surgery under general anesthesia was done after end of menstruation.

Results

Renal agenesis was absent. Antiphospholipid antibodies were negative for RPL. The resection began at the tip of the partial septum up to the base. Resection of the complete uterine septum was done from the fundus to the internal cervical os using a lateral, alternating technique of side-to-side resection up to the base of the fundus. The duplicate cervix was left intact. On laparoscopy, there was no fundal indentation and only a single uterine cavity on transillumination. Cystectomy was performed for dermoid cyst. Post procedural ultrasound fundal thickness was 1-1.17 cm. Intrauterine balloon catheter was left in place for 48 hours to prevent resected areas from coming together. Sequential estrogen/progestogen was given for 2 cycles for endometrial regrowth. Pregnancy with live births occurred 3-18 months after the procedure. Delivery was by Cesarean section in RPL at 32 weeks gestation for complete breech presentation in labor and at 38 weeks in labor with duplicate cervix.

Conclusions

Hysteroscopic resection is recommended for treatment of uterine septum with increased postoperative pregnancy and livebirth rate. The advantage of ultrasound guidance is easy estimation of fundal thickness and depth of remaining septum. Concomitant laparoscopy evaluates the pelvis, external fundal contour and extent of septal resection.

Management of two different false passages: a common challenge in hysteroscopy surgery

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Background

The creation of a false passage may also occur during any uterus cavity operation, such as termination of pregnancy, dilation and curettage, endometrial ablation, removal of IUD and hysteroscopic surgery. During the operation, the instrument is guided inside the cervical canal then into the uterine cavity. This is the “right passage”. Sometimes, there are difficulties to get through the right canal, which might lead to forcing the passage and “digging a tunnel” in the cervix, or in the uterine wall. Therefore, while misguidedly inserting the instrument, a false passage could be created by tunneling a new passageway in the cervix wall, or the uterus, between endometrium and myometrium or in the myometrium. Most of intrauterine false passage was created in the isthmus of the uterus, the risk being higher if there is significant antelexion or retroflexion.

Methods

The two patients treated with oral Estradiol Valerate at a daily dose of 6mg for two months, with the addition of dydrogesterone at a daily dose of 20mg for the last 10 days of the oestrogen therapy. A second-look hysteroscopy was carried out after withdrawal bleeding, hysteroscopic surgery would be performed if necessary.

Results

One patient is a fresh false passage was accidentally created during the operation which was not immediately recognized as a false passage. Transurethral resection of the prostate (TURP) occurred during operation. After active rescue, the patient was discharged safely. A second-look hysteroscopy was carried out two months later. The false passage had completely healed. The patient conceived spontaneously 1 year after her last hysteroscopy and underwent successful spontaneous vaginal delivery of a girl weighing 3480g. Another patient is an obsolete false passage in the right uterine horn. Three hysteroscopic surgeries were performed respectively. At last, normal uterine cavity was restored and the false passage had completely healed. She had no plan to conceive when she last attended for follow-up.

Conclusions

False passage is a rare complication encountered during diagnostic or operative hysteroscopy. Oestrogen treatment might benefit patient with the false passage, second-look hysteroscopy is requisite and important. Hysteroscopic surgery is necessary for the obsolete false passage.

Intraoperative transvaginal sonography as an adjunct to the laparoscopic management of caesarean scar pregnancy

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Background

Cesarean scar ectopic pregnancies (CSP) are rare but the incidence has significantly increased over the last decade due to the global rise in caesarean deliveries. The estimated incidence range from 1/1800 – 1/2500. These pregnancies are associated with an increased risk of maternal morbidity and mortality, especially if there are delays with diagnoses. They are classified into two types; Type 1 (endogenic) and Type 2 (exogenic). Transvaginal ultrasound is the imaging modality of choice. Treatment options are varied and we are currently without international current evidence based consensus on the optimum management. Laparoscopic resection is one method of choice and may be more suitable for the exogenic type of CSP. Gynecological intraoperative ultrasonography is not widely used but has been reported to aid with identifying myometrial pathology in some types of laparoscopic gynaecological operating such as fibroid resections.

Methods

The aim of this presentation is to demonstrate the role of live intraoperative transvaginal B mode sonography to aid the laparoscopic surgical management of caesarean section scar pregnancy. This will be presented as a step wise synced video of live intraoperative transvaginal sonography cine-loop dynamic films with correlation to the laparoscopic surgical video.

Results

A 23 year old, G3 P2 (2 LSCS) presents to the early pregnancy unit with lower abdominal pain. A live pregnancy of 6 weeks gestation embedded in the anterior myometrium over the previous scar was diagnosed on transvaginal ultrasound scan, with appearances in keeping with a type 2 CSP. The patient was counselled regarding medical, surgical and interventional radiology management and opted for surgery.

Live intraoperative sonography was performed during the procedure to aid with bladder dissection and location along with entrance of the gestational sac. Sonography aided with ensuring that complete tissue removal was performed and to assess the myometrium following laparoscopic suturing of the scar closure. The surgery was uneventful and the patient was discharged within 24 hours.

Conclusions

Intraoperative transvaginal ultrasonography is a safe, useful, cost effective and innovative adjunct to aid with the identification and resection and myometrial closure of a CSP. Further research is required to guide management practice of these types of ectopic pregnancies.

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Analysing pain as the most common cause of failed outpatient hysteroscopies

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Background

Routine outpatient hysteroscopy has gained popularity due to its effectiveness in rationalising resources and has a significantly high patient satisfaction rate. There is however a small percentage of cases that fail to reach completion in the outpatient setting, requiring an inpatient procedure. Pain has been identified as the most common cause for failed outpatient hysteroscopies. The objective of this research project is to analyse factors effecting perception of pain. If there is a better understanding of why some women find it intolerable, then we can aim to develop strategies to help alleviate these factors and improve overall uptake.

Methods

Retrospective survey of patients who had a failed outpatient hysteroscopy due to pain between 26th February 2016- 26th February 2018 at Royal Free Hospital NHS Trust.

Results

Total number of outpatient hysteroscopies performed were 1405, out of which 4.7% (66/1405) have failed. A total of 77% (51/66) of the failed hysteroscopies were directly due to intolerance to pain. The most common age group to undergo outpatient hysteroscopy was 45-49 followed by 55-59 years, presenting most frequently with post-menopausal bleeding then menorrhagia. Similarly, almost half were pre-menopausal and just over a third were post-menopausal, with a mean last menstrual period interval of 7.5 years. Two thirds were sexually active, having had 1-4 vaginal deliveries with no history of previous uterine or cervical surgery. When asked to score intra-procedure pain, two thirds of women gave 10/10 and the same number did not receive cervical block nor took any prior pain relief. A quarter of women felt post-procedure pain for up to one day. Over a half of women could not suggest any distraction method that will help to improve pain tolerance and the same group reported lack of reflection of the degree of expected intra-procedure pain in the information leaflet. Cervical stenosis and pain during negotiating the internal os, despite local analgesia, were equally the most encountered reasons for abandoning the procedure. Ultimately, three quarter of women went on to have hysteroscopy under general anaesthesia.

Conclusions

Overall outpatient hysteroscopy is well tolerated. A typical woman who experiences most pain is peri-menopausal, parous with vaginal deliveries and without risk factors for intra-uterine/ cervical adhesions. A critical time to determine success of the procedure is the time of negotiating the cervix. Cervical preparation, such as use of pre-procedure Misoprostol, as suggested by one of the women, may be prove to be useful. Non-technical distraction techniques are not deemed to be feasible by women, but those who agree with it have most commonly suggested calming music and television screen. Further assessment with misoprostol and distraction with music and TV will be studied in our setting to try and improve the failure rate.

Free Communications 9 | Hysteroscopy | Imaging

Endometrial biopsies in postmenopausal women using 15 Fr resectoscope under intracervical and fundal block with local anaesthesia only in an office setting; a feasibility study.

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Background

Studies have shown lack of tissue in 30-40% of blind endometrial biopsies taken in postmenopausal women with vaginal bleeding. Recent study has demonstrated malignant or premalignant changes in 6% of women with a normal blind endometrial biopsy. Studies have demonstrated pain scores of 7-8 out of 10 under blind curettage.

Methods

Prospective cohort study. Inclusion criteria: women > 1 year after last menstrual bleeding presenting with bleeding from the cervical canal and an uterine midline of > 4 mm or with asymptomatic endometrial polyp(s), belonging to ASA group 1 or 2 and eligible for investigation under local anaesthesia. Exclusion criteria: polyps or fibroids where the accumulated average of height, width and depth exceeds 20 mm. High thromboembolic risk, medication with anticoagulation agents (use of platelet adhesion inhibitor was not in itself considered an exclusion criteria), allergy to local anaesthesia. Request for general anaesthesia. Unable to understand spoken and written Danish or English. 128 women entered the study. One-hundred-twenty-one (94,5%) presented with bleeding, 7 (5,5%) with intracavitary structures on ultrasound scans performed as part of investigating gynaecological complaints other than vaginal bleeding. Hysteroscopic procedure: all parts of all of the procedure was performed with a 15 Fr hystero-resectoscope. In all cases, entrance was performed through the vaginoscopic approach and the fluid pressure was kept at 60 – 80 mm Hg through the use of an infusion pump. Resection methodology: polyps or fibroids were removed and a biopsy was taken from the normal looking endometrium. In women without polyps, biopsies were taken from any suspicious looking area as well as biopsies from normal looking endometrium on the anterior and the posterior wall. In cases where malignancy was suspected, a biopsy from the istmu-cervical junction was added for grading. Polyps or other deviances in the cervical canal were also resected.

Results

In two women it was not possible to visualize a cervical os. In all of the remaining 126 women the uterine cavity was reached with the 15 Fr scope, in 28 (21,8%) after hysteroscopic cutting of cervical adhesions with 5 Fr scissors. One woman asked for the procedure to be aborted after access to the cavity was gained as she felt the pressure from the fluid unacceptable. In two very obese women, the hystero-resectoscope was not long enough to reach the fundal area of the cavity. Forty-seven women had polyp(s) in the uterine cavity, 12 had polyps in the cavity and the cervical canal, 3 had fibroids and 63 had no polyps or fibroids. In all of the 125 women the procedure was completed with no complications.

Conclusions

In postmenopausal women eligible for office treatment endometrial biopsy with a 15 Fr resectoscope under local anaesthesia is a safe and highly effective alternative to blind curettage.

<https://player.vimeo.com/video/272631990?autoplay=1>

Free Communications 9 | Hysteroscopy | Imaging

Outpatient endometrial ablation under local anaesthetic: a study to assess efficacy and patient acceptability in Northern Ireland

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Background

Heavy menstrual bleeding (HMB) is a common gynaecological problem affecting 20% of women of reproductive age. HMB is defined as excessive menstrual blood loss which interferes with the woman's physical, emotional and social quality of life, which can occur alone or in combination with other symptoms.

Endometrial ablation is used in the management of up to 25% of cases of HMB. In Northern Ireland and in our unit traditionally this is carried out under general anaesthetic in a day case setting. This study looks to assess feasibility and patient acceptability of endometrial ablation under local anaesthetic in an outpatient setting. This service would be the first of its kind in Northern Ireland.

Methods

We studied the first 25 patients treated for HMB with Thermablate EAS© (Endometrial ablation system) under local anaesthetic in Antrim Area Hospital. All patients received oral paracetamol 1gram and Ibuprofen 400mg one hour prior to the procedure. Cervical and intrauterine para-osteal local anaesthetic was injected 5 to 10 minutes before the procedure. Pain scores using the numerical rating scale (NRS) were collected at the start, mid procedure and at the end. After the procedure, all patients received a telephone follow up within 2 weeks to complete a validated questionnaire to identify patient acceptability of the procedure and patient satisfaction using scale of 1 – 10. All patients were offered a telephone review at 6 weeks.

Results

Data was successfully collected from all 25 patients. Majority of our patients were premedicated with adequate analgesia. Para cervical and para-osteal blocks were achieved in 100% of our patients. No procedure related complications were observed in our series of patients. The mean pain score was 3 mid treatment and 0-1 post procedure. All patients were successfully discharged post op within one hour of the procedure. The average treatment time was 2.2 mins. 100% of the patients suggested they would recommend it to a family member. There were no readmissions.

Conclusions

From our experience, as concluded by our study, managing heavy menstrual bleeding with endometrial ablation using Thermablate EAS© under direct cervical block and para-osteal block is a safe and effective procedure. As well as being acceptable to women it has been well tolerated at an outpatient setting as demonstrated by our patient feedback and pain scores. It is not associated with risks of general anaesthetic and is likely to be significantly cost-effective. Although not suitable for all women, the short operating and recovery times have made it quite feasible to set up as an outpatient service.

Surgical technique of laparoscopic gonadectomy and histological / hormonal examination for 3 cases of AIS (Androgen Insensitivity Syndrome)

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Background

AIS (Androgen Insensitivity Syndrome) is caused by mutation of the gene encoding the androgen receptor and internal genitalia is located various area.

In our hospital, we had 3 cases of AIS performed by laparoscopic gonadectomy, whose internal genitalia existed on different area as under the peritoneum, intra-pelvis and intra-inguinal.

We will demonstrate 3 patterns of laparoscopic procedure and the result of histological / hormonal examination of them.

Methods

【Case1】 She was 21 years old and diagnosed as AIS with a gonad and para-gonadal cyst intra peritoneum around inguinal on MRI imaging. (Surgical method) After opening the retroperitoneum, the cyst was retracted with a thread and excised.

【Case2】 She was 24 years old and an elder sister of case 1. Her both gonads could be seen in the pelvis and they were connected by cord-like tissue. (Surgical method) After expanding of retroperitoneum cavity, the gonads were removed by ligation and cutting of cord-like tissue containing vessels.

【Case3】 She was 24 years old and her both gonads existed deep in the back of the inguinal duct on MRI imaging. (Surgical method) After expanding of retroperitoneum cavity, the gonads were pulled out of inguinal duct drawing the cord-like tissue connected to them and removed by electric scalpel.

Results

Histological examination:

		case1	Case2	case3
Mullerian duct	fallopian tube	+	+	+
	Rudimentary uteri	-	+	-
Wolffian duct	Vas deferens	+	+	+
	testis	+	+	+
	Paragonadal cyst	+	-	-

Hormonal examination: In all 3 cases, the level of testosterone has decreased obviously after gonadectomy, and the level of estradiol has increased gradually with HRT.

Conclusions

Laparoscopic gonadectomy could be performed anywhere the gonads existed in the pelvic cavity and some cases of AIS may have remnants of Mullerian and Wolffian duct in histology.

Tips and tricks for vaginal hysterectomy

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Background

Vaginal hysterectomy is probably the most cost effective way for hysterectomy. It is however seldom performed. Aim of this movie is to teach tips and tricks for vaginal hysterectomy and to try to increase the rate of vaginal way for hysterectomy.

Methods

This is an educationnal movie made in a teaching hospital. A woman with an indication of hysterectomy and removal of intratubal implants (Essure) was included. A vaginal hysterectomy with bilateral salpingectomy in one piece was performed.

Results

Fifteen tips and tricks for vaginal hysterectomy in one video. Tips from setting of surgical drappes to indigo carmin intravenous injection to diagnose potential bladder wound. Management of colpotomy is also reported such as use of thermocoagulation system. The way not to open anterior peritoneum before the posterior tilt of uterus to avoid bladder injury is also taught such as the way to do a one piece hysterectomy with bilateral salpingectomy (all the more for Essure removal).

Conclusions

This video is an educationnal one with the aim to teach vaginal hysterectomy which is always difficult to assess for fellows.

<https://player.vimeo.com/video/266509943?autoplay=1>

The Laparoscopic view of the corrected isthmocele defect in Caesarean

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Background

The rising of C/S globally in the world caused the occurrence of many complications, increasing of morbidity and mortality and cost

Methods

The rising of C/S globally in the world caused the occurrence of many complications, increasing of morbidity and mortality and cost. The theory about the isthmocele is mostly focused on the suturing of the uterus because of steadily increasing of isthmocele cases parallel to C/S ratio (1,2). The prevalence of isthmocele is not certain that was recorded as %19-84 (1). Now, there is no comment about isthmocele formation certainly but many investigation is done about suture techniques in C/S. In randomized controlled trial, the scar defect formation and uterine rupture or dehiscence was compared and the statistical differences was not detected with one layer or double layer suturing techniques (2). Isthmocele is not only asymptomatic disorder but also it causes abnormal uterine bleeding, pelvic pain, postcoital bleeding, infertility, ectopic pregnancy and uterine rupture. The laparoscopic approach to isthmocele gives positive results in symptomatic cases (3,4,5,6). Today, the isthmocele reparation preferred just only symptomatic cases although the surgery for asymptomatic isthmocele is conflict.

Results

35 years G3 P 3 C/S 2, 27 weeks pregnant woman was presented to our obstetric clinic as early intrauterine growth retardation (IUGR). The magnesium sulfate was injected as neuroprotective effect for 24 hours and then because of recurrent C/S. In the history, she had C/S with fetal distress and IUGR in the 27 weeks in second pregnancy (the information is not documented). Physical examination: normal, non-stress test: non-reaktif, ultrasound: 22 weeks, 620 gr, cephalic presentation, placenta anterior, fetal heart beat is normal. While surgery, the wide isthmocele defect in the C/S scar and the attachment of placenta was on the isthmocele region. The C/S incision vertically was done below the isthmocele. Vertical C/S was repaired with one layer suture technique. The isthmocele cut until reaching to myometrial tissue with cold knife and the reparation was done with one layer closure

Conclusions

the asymptomatic isthmocele surgical correction should be considered.

<https://player.vimeo.com/video/267758376?autoplay=1>

New materials in POP surgery

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Background

For safety and effective long-term effect of surgical treatment of POP on the modern stage it's necessary to use synthetic materials. Obviously there are no optimal surgical procedure and optimal material for the implantation. Modern polypropylene and PVDF materials didn't fit all criteria for ideal prosthesis, big problem is shrinkage as the major factor in most cases for non-neuropathic pain and unsatisfactory results. Initially prosthesis must be as a hammock and after remodeling must replicate original properties of connective tissue. This should provide good functional results after surgery biomechanical and biological compatibility. In comparison with PP, titanium induce significantly higher ratio of collagens I and III types production around threads thus provide active synthesis of "mature", type 1 collagen. These properties mostly applicable to super-light scaffold "titanium silk" (30-50 g/m²) made of 0.06 mm thread with pore size 2x2mm. This material more elastic compared to PP and restore to its original shape after tension and can be cut for making individual shape.

Methods

In Gynecological department of Central Clinical Hospital of the Russian Academy of Sciences from May 2017 to march 2018 Fifty two patients with apical and/or anterior POP were operated. Follow up was 6-12month. For the reconstruction of fascial defects scaffold 11x6cm were implanted. All patients were performed uterine-sparing surgery by fixation of scaffold bilaterally to ssl and anterior portion of obturator foramen, cervix (extraperitoneal hystero-colpopexy). Mesh was fixed with prolene sutures (0, 00). It's important to note that in comparison to standard methods, using PP due to rather different properties (much more roughness, resistance in tissues and hyper-elasticity) we use in several times less foreign material.

Results

Mean operative time were 34,4+5,3min. Early postoperative complications were: febrile temperature 24 hours 3(5.8%), nonobstructive bladder atony after cyctocele repair, Ba+5 1(1,9%). For the period of follow-up we didn't note any erosion, vaginal shortening and any type of pain. But after the operation we noted 3 (5,8%) cases of mild de novo SUI. No recurrences were noted in any cases (POPQ >1 stage in any compartment). Vaginal sonography shows correct position of mesh and non-rigid vagina without scarring and deformation of surrounding structures and bladder wall. It's impossible to palpate implant except obturator and SSL points of fixation. Vaginal wall was mobile and elastic.

Conclusions

It's first time we report anterior and apical restoration using augmentation with "titanium silk" by bilateral transobturator and SSL fixation. This method shows it's high effectiveness and safety for the 12 month follow up.

Sacrocolpopexy potpourri – variations of the fixation technique

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Background

Pelvic organ prolapse (POP) repair frequently necessitates suspension of the apical compartment. Laparoscopic sacrocolpopexy appears to be the superior treatment of choice in (sexually) active patients. However, the sacrocolpopexy technique is poorly standardized, and individual characteristics occasionally require alterations of the surgical procedure. In this didactic video we compare four approaches: Laparoscopic sacrocolpopexy, laparoscopic hysteropexy, laparoscopic lateral suspension and rectus fascia suspension of the vagina.

Methods

The decision whether to preserve the uterus or not is largely dependent on the patients' desire to keep the uterus. Both subtotal hysterectomy with concomitant sacrocolpopexy and uterus-preserving hysteropexy are shown in this film.

Moreover, the video shows two cases of alternative mesh fixations which can be used in selected patients.

Results

The first was a 38 year old gravida 2 para 2 with no further desire for children and a symptomatic second degree POP, dyspareunia and normal pre-operative urodynamic examination. The promontory was not suitable for fixation because of posterior spondylodesis screws. Thus, a lateral suspension was used. Twelve months after the operation the patient is asymptomatic, has no signs of POP recurrency and the dyspareunia disappeared. The same method was recently used in a patient with recurrent POP where the promontory was covered with exhaustive bowel adhesions 15 years after open sacrocolpopexy (not shown).

The second patient was 49 years old with a third degree POP and a large cystocele. Since she previously had an extensive anterior spondylodesis the promontory was not accessible. An anterior fixation of the mesh to the rectus fascia was chosen for POP repair. Twenty-four months after the operation no recurrent POP occurred and the patient is content with the result.

Conclusions

Laparoscopic sacrocolpopexy is considered to be highly efficacious in apical prolapse repair. This video provides an overview of the surgical technique and various possibilities for mesh fixation.

<https://player.vimeo.com/video/272646721?autoplay=1>

ORAL AND VIDEO PRESENTATIONS IN PLENARY SESSIONS (133)

ES27-0080 –

Hysteroscopy | Intrauterine Adhesions and Complications

Increased fetal chromosome detection with the use of operative hysteroscopy during evacuation of products for miscarriage

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Background

Primary objective is to determine whether incorporation of operative hysteroscopy with biopsy of products of conception, in conjunction with a suction curettage for a first trimester missed abortion, affected the rate of maternal cell contamination when chromosomal analysis was performed on the products of conception. Secondary objective was to determine the rates of retained products of conception with incorporation of hysteroscopy post suction curettage.

Methods

Design: Retrospective cohort study

Settings: Academic affiliated community hospital.

Patients: Infertility patients undergoing evacuation of products of conception for first trimester miscarriages between 2006 and 2017.

Interventions: Suction curettage or hysteroscopic biopsy and suction curettage followed by chromosomal analysis of products of conception for determination of fetal genetics.

Results

A total of 264 charts were analyzed. Patients were categorized based on surgery performed: Group 1 (n=174)- suction curettage only; Group 2 (n=90)- operative hysteroscopy with biopsy of products of conception followed by suction curettage then diagnostic hysteroscopy to look for retained products. No significant differences were detected between the groups for age, BMI, ethnicity, gravida, parity, primary infertility, secondary infertility, spontaneous conception, single or multiple gestation, and surgical complications. Fetal chromosome detection was significantly higher without maternal contamination in Group 2 (88.5%) versus Group 1 (64.8%), $p < .001$. There was no significant difference in postoperative retained products of conception between both groups.

Conclusions

Obtaining fetal genetics can be useful when planning for a future successful pregnancy. The addition of operative hysteroscopy to biopsy the gestational sac, chorionic villi and/or fetus significantly decreased the risk of maternal contamination and increased the detection of fetal chromosomes for genetic analysis without increasing the risk of surgical complications.

Hysteroscopy | Intrauterine Adhesions and Complications

Hysteroscopic morcellation of retained placenta and treatment of Asherman's syndrome

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Background

Retained placenta complicates approximately 1% of deliveries. Manual removal of placenta can often lead to incomplete emptying of the uterine cavity with persistent symptoms (commonly vaginal bleeding) and echogenic foci seen on transvaginal ultrasound.

Standard modes of management include conservative, medical and surgical treatments.

Over 90% of cases will resolve with conservative management with blind evacuation of the uterine cavity the most commonly seen 2nd line measure.

Failure of these standard treatment options present a difficult situation for the clinician as subsequent management often have increased complications such as intrauterine adhesions and infection while there is a lack of agreement on how best to approach these difficult cases.

Recently there have been significant advances in hysteroscopy and an increased leaning towards procedures being carried out in the outpatient setting.

The aim of this case review was to assess the use of hysteroscopic morcellation in the outpatient setting, with regards to efficacy, patient safety and patient tolerability in the management of a case of retained placenta where conventional treatment options had failed **Methods**

Targeted resection of calcified placental tissue using the Myosure Reach morcellation technique was performed on a lady 12 weeks post vaginal delivery after failed conservative and 1st line surgical treatment (dilatation and curettage)

- the procedure was performed in the outpatient setting, under ultrasound guidance and took approximately 20 minutes with a morcellation time of 9 minutes

- oral analgesia 1 hour before the procedure was given

- instillagel was applied intracervically

- 4.4ml of lignospan 2% was applied paracervically

- the cervix was dilated to Hegar 7

- normal saline was used for distension and fluid balance was monitored

- pain scores were measured using visual analogue score

Results

The procedure was very well tolerated by the patient with the following pain scores :

1. Pain during LA injection : 3/10
2. Pain during cervical dilatation : 3/10
3. Pain during morcellation : 1/10
4. Pain after the procedure : 0/10

- The fluid deficit was 1038ml
- Histology confirmed calcified retained products of conception
- Ostia were visualized at end of procedure and normal uterine cavity shape restored

Conclusions

Hysteroscopic morcellation of retained tissue in refractory cases appears to be a safe and precise method of management.

The procedure is carried out in the outpatient setting thus avoiding general anaesthesia when compared to transcervical resection with the bipolar or monopolar resectoscope while also avoiding the associated complications of electrocautery and only resecting retained tissue thus preserving endometrial integrity.

The procedure is cost effective as it doesn't involve hospital stay and theatre utilization.

<https://player.vimeo.com/video/272642082?autoplay=1>

Hysteroscopy | Intrauterine Adhesions and Complications

Delayed hysteroscopic resection of symptomatic placenta accreta remnants

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Background

36 year-old G2P1 was found to have a posterior placenta accreta during a cesarean section. Due to her clinical condition a hysterectomy was avoided but adherent pieces of the placenta was left in situ. Due to ongoing spotting up to four weeks after the cesarean section we opted to proceed with a hysteroscopic resection of the retained products of conception.

Methods

Delayed hysteroscopic resection in an outpatient hysteroscopic clinic under intravenous sedation and cervical block.

Results

Using a hysteroscopic morcellator we were able to remove all placental remnants and obtain complete symptom resolution.

Conclusions

In selected patients a delayed hysteroscopic resection is a good options for management of retained products of conception, such as placenta accreta remnants, as shown in this case.

<https://player.vimeo.com/video/269563918?autoplay=1>

Endometriosis 1

The ENABLE study (Endometrioma - ablate or excise) A pilot study of automated Anti-Mullerian Hormone change following surgery for endometriomata.

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Background

Anti-mullerian hormone (AMH) is a protein produced by ovarian thecal cells and automated measurement of AMH is a recognised and reproducible method of measuring ovarian reserve. AMH levels are reduced by the presence of endometriomata and surgery to treat these. The reduction in AMH caused by surgery to endometriomata is postulated to be due to damage to normal ovarian tissue by either removal of tissue, damage caused to the vascular supply or by heat damage caused by the technology applied. We present a study of the effect of endometrioma surgery using Plasmajet on AMH levels.

Methods

This trial was approved by the local ethics committee and consent was obtained from participants. Thirty women with ultrasound diagnosis of endometriomata planned for surgical treatment were recruited to the study and had pre-operative AMH testing. In twenty one participants endometriomata were confirmed at operation and these women had second follow up samples taken 3 months later. All surgery was performed by two of the authors (RH and CH) using Plasmajet (plasma surgical Atlanta, Georgia).

Results

The 21 women who had second samples taken had a mean age of 37 years. Paired AMH were taken on day 1 (range 1 to 3) of the cycle prior to surgery and on day 2 (range 2-3) of the cycle three months following surgery. Bilateral Endometriomata were present in 33% of the women. 67% were not using hormonal contraception. Mean pre-operative AMH was 0.896 ng/ml (range 0.382 to 1.96). Mean post-operative AMH was 1.09ng/ml (range 0.453 to 1.88). There was no reduction in AMH levels following surgery ($p=0.74$). Adjustment for age and site of endometriomas (using linear regression modelling accounting for clustering) did not materially change the association between pre and post-surgery AMH values.

Conclusions

Pain is the usual primary reason for surgery and surgical stripping of endometriomata rather than ablation is recommended by ESCHRE and NICE as this has a lower rate of recurrence of pain although evidence for this is only moderate. The reduction in AMH following surgery to endometriomata is thought to be by either removal of healthy tissue, damage caused by disruption to the vascular supply to tissue or by heat damage caused by the technology applied. The depth of effect of plasmajet is 0.2mm and lateral thermal spread is absent and we propose that this is the reason for the lack of damage to the ovarian reserve in our study. There is a potential need to maximise the fertility of all women having surgical treatment for endometriomas. Any further studies of surgical management of endometriomata should be randomised studies of excision versus ablation and should have long term follow up for recurrence of pain or cysts, pregnancy rates and AMH levels.

Endometriosis 1

An audit of patients who underwent a surgical procedure for the management of dysmenorrhoea

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Background

Dysmenorrhoea is painful abdominal cramps occurring shortly before or with menstruation. It is termed primary when no underlying cause is found. Secondary causes for dysmenorrhoea include fibroids, endometriosis and adenomyosis. It is a common cause of referral to gynaecology. We conducted a review to aim to determine the surgical procedures and outcomes for patients referred to secondary care with dysmenorrhoea.

Methods

Retrospective case note review of 49 patients who underwent a surgical procedure primarily for dysmenorrhoea at a tertiary gynaecology hospital from January 2016-January 2018

Results

47 were elective procedures following an outpatient consultation. 2 were emergency operations following prolonged hospital admission with worsening dysmenorrhoea. The average age was 37 years. 44% of women were nulliparous which is a risk factor for dysmenorrhoea and would have affected the choice of surgical procedure. 86% of cases were of secondary dysmenorrhoea with a gynaecology diagnosis found at the time of surgery, the most common being endometriosis found in 14 patients. 47% had co-existing heavy menstrual bleeding. Conservative management with analgesia was tried prior to surgery in 44% and at least 1 form of hormonal treatment in 71%. 13 patients underwent a laparoscopy with treatment, of these 2 required further medical treatment at follow-up and one was listed for hysterectomy. 5 patients had a diagnostic laparoscopy with a normal pelvis, one was referred to the chronic pain team and the others discharged with reassurance. Other procedures included endometrial ablation in 7 and hysterectomy in 10 patients. 60% of these were performed laparoscopically, of those performed abdominally there were fibroids or endometriosis resulting in a high chance of converting to open surgery if attempted laparoscopically. There were no post-operative complications. Endometrial ablation failed to treat the dysmenorrhoea in 2 patients who went on to have a hysterectomy. The most common associated symptoms were dyspareunia in 22% and dyschezia in 14%. The presence of associated symptoms did not predict disease found at the time of surgery. 4 women were also treated with a Mirena IUS and in all it treated the dysmenorrhoea.

Conclusions

Medical management with NSAIDs and hormonal therapies should be first line for both primary and secondary dysmenorrhoea before considering surgery. If heavy menstrual bleeding is also present treatment with endometrial ablation or the Mirena IUS may also improve dysmenorrhoea. If endometriosis is suspected from the examination or history with the presence of associated symptoms such as dyspareunia a laparoscopy can be considered as a first line investigation, 72% of our patients had a finding at laparoscopy which was treated and 77% required no further treatment at follow-up.

Endometriosis 2

Surgical outcomes and quality assurance following surgery for DIE endometriosis, requiring dissection of Okobayashi space

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Background

Our aim was to provide quality assurance of surgery and assess the outcomes for patients undergoing surgical treatment of deep infiltrating endometriosis, requiring dissection of para-rectal space at the tertiary endometriosis centre of Queen Alexandra Hospital, Portsmouth, UK between June 2016 and June 2017

Methods

Patients were identified via the British Society of Gynaecological Endoscopy (BSGE) Endometriosis database. Medical records were obtained and a Microsoft Excel spreadsheet was populated with data taken from the patients' notes, electronic pathology records, the electronic theatre reporting software and BSGE pelvic pain questionnaires. We looked at several variables including duration of stay, whether the surgery was laparoscopic or open, what their surgery included, what were the complications and postoperative outcomes based on EQUVAS .

Inclusion criteria was that the patient must have undergone para-rectal space dissection as part of severe deep infiltrating endometriosis treatment and had either rectal shaving of endometriosis, disc resection, segmental bowel resection or excision of USL nodules requiring rectal mobilisation. 52 cases satisfied the inclusion criteria.

Details regarding intra-operative findings and surgical approach were taken from operative notes and information regarding post-operative complications was identified from the medical records.

Results

52 patients underwent surgery and of these 8% were day case procedures. 34% required one night, 8% two nights and 1% four nights stay in hospital.

100% of operated patients had Laparoscopic treatment with 0% conversion to open surgery. 15/52 (28.8%) had hysterectomy as part of their treatment, 11/52 (21.1%) had oophorectomy, 50/52 (96.1%) had ureterolysis, 1/52 (1.9%) required intraoperative ureteric stenting and 1(1.9%) patient had conversion from rectal shaving to disc resection, which was completed laparoscopically.

40.5% of patients reported improvement in symptoms of premenstrual pain.

49% reported a reduction in their menstrual pain scores.

39.3% reported improvement in symptoms of dyspareunia.

55.5% reported improvement of menstrual dyschezia

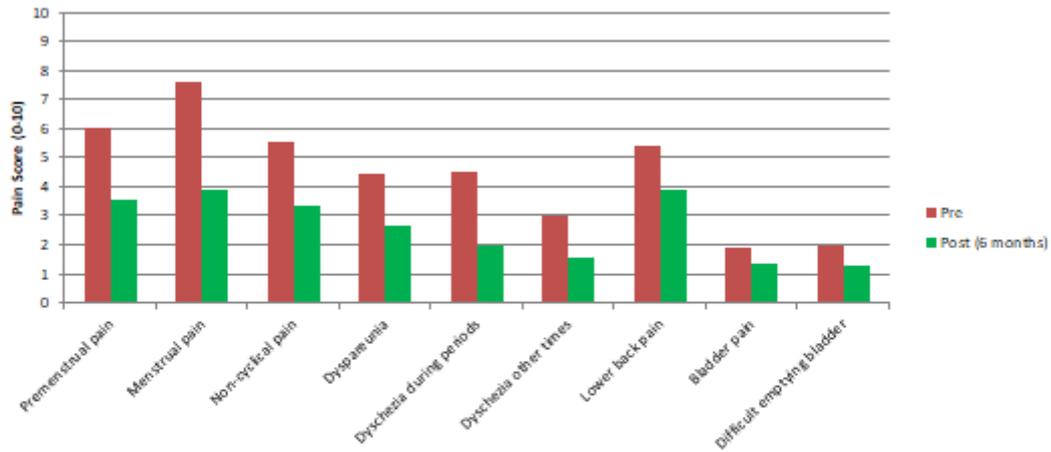
48.1% reported improvement in dyschezia overall

28.3% reported improvement in lower back pain

26.% reported improvement in bladder pain and 35.2% reported improvement in difficulty emptying the bladder.

69% of patients reported significant improvement on EQUVAS health score

Pre- and Post-Pain Scores (Mean)



	Pre-menstrual	Menstrual	Non-cyclical	Dyspareunia	Dyschezia during periods	Dyschezia other times	Lower back pain	Bladder pain	Difficulty emptying bladder
% Change	40.5	49.0	39.6	39.3	55.5	48.1	28.3	26.6	35.2

2 patients had pelvic abscess, 1 patient developed late complication in the form of pelvic haematoma.

1 patient had delayed presentation of ureteric leak. 1 patient had adenocarcinoma within endometrioma of the ovary.

Conclusions

Overall we have observed an excellent and encouraging response to surgical management of severe deep infiltrating endometriosis, requiring para-rectal (Okobayashi) space dissection at Queen Alexandra Hospital, Portsmouth with patients reporting improved quality of life scores and reduction of pain symptoms.

We have also observed a reasonably low complication rate despite the complexity of cases requiring extensive treatment of deep infiltrating endometriosis requiring para-rectal space dissection in all cases.

The quality assurance process is of paramount importance in endometriosis surgery. In Portsmouth Endometriosis centre annual audit of surgical outcomes is mandatory.

Nerve sparing endometriosis surgery

Anatomical and surgical insights for hypogastric nerves' preservation during pelvic retroperitoneal dissection

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Background

During several gynaecological retroperitoneal pelvic surgeries, portions of the pelvic autonomic nervous system can be accidentally damaged, in particular hypogastric nerves (HNs), leading to significant visceral dysfunctions, dramatically affecting woman's quality of life. Nerve-sparing techniques for the treatment of gynaecological diseases were proposed and standardized in order to reduce nerve injuries. However, it is deemed necessary to clarify the hypogastric nerve's cartography. The aims of this study were to clarify the relationship of hypogastric nerve (HN) with definite anatomical landmarks and to assess any anatomical differences between the two sides of the pelvis.

Methods

Detailed pelvic retroperitoneal dissection were performed in 5 nulliparous embalmed female cadavers and in 10 nulliparous women during in vivo laparoscopic surgery for rectosigmoid endometriosis without parametrial infiltration or radical hysterectomy (B1 according to Querleu-Morrow) for cervical cancer. On both hemipelvis, the closest distance between HNs and ureters, midsagittal plane, midcervical plane or uterosacral ligaments were documented. Comparison of anatomical data of the two hemipelvis were also conducted.

Results

On cadavers and in vivo dissection, a right and left HNs, covered by pre-hypogastric fascia, were identified in all specimens. Irrespective of the side, a wide anatomical variability was reported. Regarding differences between the two hemipelvis, we found that the HN was closer to the ureter on the left side (mean 8.6 mm; range 7-12 mm) than on the right one (mean 14.5 mm; range 10-25 mm) [$p < 0.001$]. On the right side, the HN was closer to the midsagittal plane (mean 14.6 mm; range 12-17 mm) than on the left one (mean 21.6 mm; range 19-25 mm) [$p < 0.001$]. Mid-cervical plane was found 2.7 mm (range 2-4 mm) to the left of the midsagittal one. Right HN was found closer to mid-cervical plane [mean 17.8 mm (range 15-21 mm) on the right side; mean 18.3 mm (range 16-20 mm) on the left side; p -value > 0.05] and utero-sacral ligament [mean 3.2 mm (range 1-6 mm) on the right side; mean 3.4 mm (range 1-8 mm) on the left side; p -value > 0.05] than the left one, without statistical significance.

Conclusions

An accurate knowledge of the pelvic retroperitoneal anatomy and differences between the two sides of the pelvis are essential to preserve HN during surgical dissection. Because of the wide anatomical variability, the use of an interfascial approach between fascia propria recti and pre-hypogastric fascia could help to perform an efficient nerve-sparing surgery.

Nerve sparing endometriosis surgery

Pain and fertility outcomes of nerve-sparing, full-thickness bowel resection for deep infiltrating endometriosis (DIE) - a prospective cohort study

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Background

To evaluate the surgical outcomes of segmental resection (SR) and discoid resection (DR) regarding fertility, pain symptoms and quality of life score of women with deep infiltrating endometriosis (DIE) involving the rectosigmoid.

Methods

From March 2011 to December 2016, a total of 134 patients were evaluated. Patients underwent conservative surgery with disc resection or radical surgery with nerve-vessel sparing segmental resection. Primary endpoint was potential reduction in pain symptoms, i.e., dysmenorrhea, dyspareunia, dyschezia and dysuria measured by numerical analogue scale (NAS). Secondary endpoint was evaluating fertility outcomes in the subfertile group of patients and complication rates according to Clavien-Dindo classification.

Results

Of the 134 patients included segmental resection was performed in 102 (76.1%) patients and discoid resection was performed in 32 (23.9%) patients. There was no difference in duration of surgery, mean hospital stay or discrepancy in hemoglobin level comparing the two groups. There was no significant difference in the AFSr staging. However, there was a significant difference in the severity of the bowel disease as recorded by the ENZIAN score for, bowel lesions >3cm, in the group undergoing SR vs. DR. One-hundred and twelve (83.6%) patients were eligible for long-term follow-up. Twenty-two patients were lost to long term follow-up (16.4%). In both cohorts there was a significant reported decrease comparing pre- and postoperative NAS of dysmenorrhea, dyspareunia, dyschezia and quality of life scores. Pre-operatively subfertile patients eligible for long-term follow up were 50/81 (61.7%) in the SR and 11/31 (35.4%) in the DR group. The overall pregnancy rate 39/61 (63.9%) was observed with a mean postsurgical conception interval of 7 months (range 2-51 months) and 5 months (range 1-48 months) in the SR and DR group respectively. Of all the 61 infertile patients, 26 (42.6%) became pregnant spontaneously and 13 (21.3%) via in vitro fertilization (IVF). The overall complication rate (Clavien-Dindo III-IV) was 8/134 (5.9%). There was no statistical significant difference in the severity of complications between the cohorts.

Conclusions

We found a significant improvement in pain symptoms and quality of life score in patients undergoing surgery with SR or DR due to symptomatic rectosigmoid endometriosis. We observed good fertility results both, spontaneous and after assisted reproduction technique (ART) in the subgroup of patients with infertility.

Adhesions | What is the status quo for adhesion prevention in gynaecological minimal access surgery?

Restoring the endometrium - The use of mechanical morcellation to manage Intra-uterine adhesions following myomectomy in fertility patients

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Background

As the average age of child-bearing rises, there are increasing numbers of women seeking fertility-preserving methods for the treatment of fibroids. Surgical methods include hysteroscopic, laparoscopic and open myomectomy all of which are recognised to potentially result in adhesion formation.

Methods

We present 2 interesting cases of women presenting to our fertility unit with intra-uterine pathology following myomectomy surgery and show their management using mechanical morcellation in an outpatient setting.

Results

Case 1 – a 33 year old woman with a 3 year history of unexplained infertility had previously undergone an open myomectomy during which the endometrial cavity was breached. A pelvic Magnetic Resonance Imaging (MRI) scan was arranged to investigate for further fibroids. This revealed multiple small fibroids and a suggestion of small artefact in the endometrium possibly from previous surgery. Outpatient hysteroscopy was performed which revealed remnant suture material within the endometrium in addition to intra-uterine adhesions and a submucous fibroid. These were all resected under local anaesthetic in the outpatient setting using a mechanical morcellator device (Myosure). A copper Intra-uterine Contraceptive Device (IUCD) was inserted. This was removed 8 weeks later and a check hysteroscopy revealed almost complete resolution of the previously present pathologies.

Case 2 – a 39 year old woman had previously undergone 2 x laparoscopic and 1 open myomectomy with breach of endometrial cavity during the latter. She conceived spontaneously but sadly experienced a spontaneous miscarriage at 20 weeks gestation. She required manual removal of placenta but continued to bleed significantly in the puerperium. Repeat ultrasound scan suggested endometrial pathology and outpatient hysteroscopy revealed both a placental polyp and intra-uterine synechiae. These were resected under local anaesthesia using a mechanical morcellator and an IUCD was inserted. An interval check hysteroscopy showed restoration of near normal anatomy.

Conclusions

The following points will be discussed;

The use of mechanical morcellation devices to minimise further trauma to the endometrium.

Whether we should be doing routine interval hysteroscopy for patients whose endometrial cavity is breached during myomectomy and may desire future fertility.

The role of hysteroscopy in the routine investigation of all fertility patients.

Adhesions | What is the status quo for adhesion prevention in gynaecological minimal access surgery?

Hysteroscopic approach vs. traditional Hegar dilation in Cervix Stenosis: a ten year Single institution experience (2007-2017)

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Background

difficulties in entry because of cervical stenosis, lead to an increase in complications and a failure to complete the needed procedure. This study is to evaluate the effect of hysteroscopy in the management of cervix stenosis.

Methods

It is a case-control study and has been done in Frankfurt university hospital in the last ten years. The patients who had cervix stenosis and needed Cervix dilation as a therapeutic procedure or to do other intervention have been included in this study. After year 2012 our institute has tried to perform hysteroscopic guided dilation. Retrospective review of medical records was performed and outcomes in these 2 groups of patients have been compared.

Results

Analysis of 153 procedures was done, 73 patients in Hegar and 80 patients in hysteroscopic group. Most of the patients in both groups were either nulliparous or postmenopausal. Complications in Hegar group were as follow: uterine perforation in 5 patients (6.8%), false passage in 8 patients (11%) (Impossibility to find the cervix canal which necessitated the operation interruption) and bleeding in 7 patients (9.6%) (was controlled in 2 patients without operation interruption). In hysteroscopic group we have had bleeding in 2 cases (2.5%) which was controlled successfully, in 5 (6.2%) patients cervix dilation was not possible and it was decided to do the hysteroscopy and laparoscopy simultaneously, in 3 patients because of no written consent for laparoscopy it was decided to do the second operation. The operation time in both groups was similar. Postoperatively 11 patients (15%) in Hegar group and 3 (4%) patient in hysteroscopic group had abdominal pain. In 9 (12.3%) patients in Hegar group and 2 (2.5%) patients in hysteroscopic group discharge on the same day was not possible.

Conclusions

finding an optimal way overcoming cervical stenosis is of great importance for reducing both complications and failure rates. It seems using the hysteroscope the stenosed cervix can be dilated safely under direct vision.

Endometriosis 3

Uterine artery injury during laparoscopic adhesiolysis of rectovaginal endometriosis: Achieving safe haemostasis

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Background

Laparoscopic adhesiolysis of rectovaginal endometriosis requires a high technical surgical ability, good knowledge of anatomy and a demonstration of a safe, systematic surgical approach to ensure the patient has a good surgical experience and relief of symptoms.

A 32 year old female, presents with secondary infertility. She has had one child by vaginal delivery 4 years previously and is awaiting IVF. An ultrasound scan performed by the IVF unit find the ovaries to be fixed and high with bowel overlying the pouch of douglas. Her medical history includes 2 previous laparoscopies, the latter was laparoscopic excision of Stage 4 rectovaginal endometriosis.

Methods

The objective of this video is to demonstrate the management of a live intraoperative vascular injury to the uterine artery and subsequent laparoscopic management. The aim is to display a safe technique of haemostasis, respecting the surrounding anatomy and maintaining a clear surgical field.

Results

The patient attended for a laparoscopic mobilisation of the ovaries and rectovaginal adhesiolysis. Intraoperatively, inadvertent injury to the uterine artery occurs during dissection of the rectum from the posterior aspect of the uterus. Pressure was applied and adhesiolysis of the rectal adhesions was performed with short bursts of monopolar energy. The ureter was identified and the overlying peritoneum dissected. The course of the ureter was then tracked from the pelvic brim and identified away from the site of injury, below the uterine artery. The vessel was safely coagulated and haemostasis was achieved. The rectum was dissected further and the pouch of douglas is exposed. A low pressure haemostats check was performed prior to closure.

Conclusions

Minor vascular injuries can be dealt with laparoscopically using a systematic approach. Compression at the site of injury should be the initial step to minimise bleeding. To ensure safe use of diathermy energy, care must be taken to minimise the risk of thermal injury to surrounding visceral organs.

<https://player.vimeo.com/video/272753622?autoplay=1>

Endometriosis 3

Is deep endometriosis a progressive disease under medical treatment?

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Background

In the last years, the progress of diagnostic imaging has allowed a reliable noninvasive diagnosis of deep endometriosis (DE). Moreover, there is growing evidence about the efficacy of medical treatment for the management of DE symptoms, which is now considered to be the first-line treatment. However, few studies analyse the evolution of DE lesions with objective radiological data in patients undergoing medical treatment or untreated, and this can be especially relevant for patients with visceral involvement.

Methods

Observational retrospective study in Vall Hebron tertiary hospital. Study period: 2011-2017. Inclusion of patients with radiological diagnosis of deep endometriosis by pelvic magnetic resonance imaging (MRI) undergoing medical treatment (oral contraceptives, progestin, or add-back therapy) or expectant management, that have been followed with MRI monitoring in the center. The evolution of the symptoms, the MRI findings, the history of DE surgery and the need for surgery during the follow-up have been evaluated.

Results

In the study period, 34 patients were included. The mean follow-up time was 32 months (6 - 91 months). The majority of patients received medical treatment, and 5 patients were untreated. A control MRI was performed at 25 months on average (6 - 49 months) depending on radiological and clinical findings. According to the MRI: 27 central lesions of the posterior compartment (2 type I, 15 type II, and 10 type III lesions) and 1 lateral lesion, 4 lesions of the anterior compartment, and 2 lesions in extragenital location (inguinal canal and sciatic nerve lesions). For the majority of patients (71%) the follow-up period was uneventful with no radiological progression, and only 10 patients (29%) required surgery. The indication for surgery was in 5 patients (14%) due to poor control of the symptoms with medical treatment, in 2 patients (6%) due to intolerance of treatment; in 3 patients (8%) radiological progression was observed in addition to poor control of the symptoms (type II, type III and inguinal canal lesions). No differences were observed between patients with successful medical treatment and patients requiring surgery regarding the age or the size of the lesions. Half of the patients having a recurrence (after surgery for DE) required surgery during follow-up. No cases of hydronephrosis due to ureteral stenosis or intestinal obstruction were recorded.

Conclusions

The majority of the patients present radiological stability and good control of the symptoms without the need for surgery.

Non-surgical treatment seems a good therapeutic option in patients with DE even with visceral involvement (after sharing the decision with the patient and strict monitoring).

The history of previous surgery for DE could be a risk factor for medical treatment failure.

Limitations of the study: retrospective design and few cases. We need controlled multi-centric studies to know about the evolution of DE under medical therapy.

Endometriosis 3

Changes in serum anti-mullerian hormone levels in patients after endometrioma stripping surgery: outcomes after six and 12 months

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Background

to investigate the impact of laparoscopic endometrioma cystectomy on ovarian reserve and to identify the most important factors in predicting ovarian reserve in patients with endometriomas.

Methods

prospective study, one center, one surgeon method is used. a total of 54 patients (18-42 years) were recruited, 37 of whom had a unilateral endometrioma (68.51%) and 17 of whom had bilateral endometriomas (31.48%). they underwent laparoscopic stripping surgery for endometrioma(s). the serum concentration of amh, fsh and oestradiol was assessed before surgery and 6 and 12 months after surgery. the primary outcome was the ovarian reserve damage assessed by serum amh concentration. secondary end points were the persistence or recovery of ovarian damage after one year. diagnosis of endometrioma(s) was set on clinical and ultrasound examination. the mean patient age was 30.26 ± 4.52 years. the severity of endometriosis was determined according to the revised AFS classification (rAFS score), with a mean of 49.68 ± 24.13 . the diagnosis was confirmed histopathological. results were analyzed by standard software SPSS.

Results

amh concentrations decreased after the laparoscopic excision of cystic ovarian endometriomas. before surgery and 6 and 12 months after surgery, the concentrations were 3.07, 1.29, and 1.46 ng/mL, respectively. in the unilateral group, the median AMH levels were 3.31, 1.43, and 1.72 ng/mL, respectively, and in the bilateral group, the levels were 2.55, 0.98, and 0.89 ng/mL, respectively. the serum AMH concentrations thus decreased by $53.27 \pm 38.2\%$ and $49.43 \pm 38.3\%$ at six and 12 months, respectively, after cystectomy. There was a recovery of serum AMH hormone in the unilateral endometrioma group 12 months after surgery (borderline significant, $p = 0.056$). There was some recovery in the serum AMH level 12 months after surgery in the bilateral endometrioma group, but the change was not significant ($p = 0.698$). Preoperatively, among 54 patients, 48 patients (88.88%) had a serum AMH level ≥ 1.01 ng/mL. Six and 12 months after the surgery, 28/54 patients (51.85%) had a serum AMH level ≥ 1.01 ng/mL. Of the 31 women who were interested in achieving pregnancy, 18/31 women spontaneously became pregnant and gave birth to a live baby (58.1%). Additionally, 6/31 women became pregnant by IVF and had a live birth (19.35%).

Conclusions

in patients with endometriomas, the decrease in ovarian reserve occurs immediately after the excision of the endometrioma. significant predictors of amh values at 6 and 12 months after surgery include amh at baseline, patient age, and bilateral endometriomas.

Endometriosis 3

Summary of Northern Ireland's first BSGE endocentre and patient experience

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Background

The first BSGE Endocentre in Northern Ireland was established in the Western HSCT provisionally in 2014 and was accredited in 2016. The team comprises initially two laparoscopic surgeons (now one), colorectal and urology surgeons and initially two nurses (currently one). On average 48 patients are seen per month at a dedicated endometriosis clinic. There is one dedicated all day theatre list per month for severe cases with MDM once a month for complex cases. Other services include access to pain team, NHS acupuncture and psychologists. Endometriosis support group meetings are available to patients (in Belfast).

We aimed to determine symptoms, demographics and quality of life outcomes for women undergoing surgery for severe endometriosis in the Western HSCT since the BSGE Endocentre was established. Patient feedback on current endometriosis services, and suggestions for improvement were also sought.

Methods

BSGE endometriosis database was analysed for NI patients in terms of BMI, smoking status, history of previous surgery or hormonal therapy, most prevalent symptoms and pre- and post-surgery quality of life (QOL) measures (EQUVAS numeric 0-100 score). We undertook telephone questionnaires for 17 active database patients about past and current endometriosis services and suggestions for improvement.

Results

Of 73 patients on the database, 60 had QOL score (EQUVAS numeric 0-100 score) recorded. Average BMI was 25, 11% of patients smoked, 37% had used hormonal therapy pre-surgery and 62% had previous surgery for endometriosis. Most commonly used hormonal therapy was COCP (15%) followed by GnRH analogues (13%) then Mirena IUS (7%) and progestogens (5%). Most prevalent symptoms were menstrual pain (81%); premenstrual pain (63%); lower back pain (59%); dyschezia (46%); non-cyclical pelvic pain (44%); dyspareunia (37%); bladder pain (10%) and constipation (3%). Average pre-surgery QOL score was 57, with average scores at 6 months, 12 months and 24 months post-operatively 67, 71 and 57 respectively. On telephone questionnaire of 17 patients, average length of time to diagnosis was 5.5 years (range 1-20 years) and average distance to travel to endometriosis clinic was 14 miles (range 2-55 miles). 88% had attended gynaecology services before introduction of the endometriosis clinic and 35% noticed improvement in endometriosis services since then. Feedback on current services was mostly positive (88%) with suggested improvements such as "more information, especially among younger women" and "better access to services and post-operative support for surgical menopause". All interviewed patients felt that a patient support group would be beneficial.

Conclusions

On average patients had improved QOL scores at 6 months and 12 months post-operatively with this effect deteriorating to baseline by 24 months post-operatively. Based on patient feedback, we are currently working to establish the first endometriosis support group in the Northwest, which would be run by the charity Derry Well Woman and the Patient Client Council.

Endometriosis 3

Laparoscopic treatment of focal adenomyosis using double flap method

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Background

A step-by-step explanation of the laparoscopic treatment of laparoscopic adenomyomectomy using double flap method (instructive video).

Methods

The 38-year-old woman with single spontaneous vaginal deliveries presented with heavy bleeding, severe dysmenorrhea (graded 9/10 on a 10 point-VAS) for two years. Diagnosis of adenomyosis was preoperatively verified by transvaginal 2D sonography and magnetic resonance imaging (MRI). Asymmetrically enlarged uterus (posterior wall was thicker than anterior wall) and 5- cm adenomyotic foci on the anterior uterine wall were clarified with the gray scale ultrasound imaging. Laparoscopic adenomyomectomy was planned in terms of her wishes to preserve her uterus. An incision was made via a harmonic scalpel (Ethicon, Cincinnati, OH), in the midline of the serosal surface and continued the uterine cavity was reached. Afterward, adenomyomatous tissues were grasped with forceps and excised from the surrounding myometrium thereby leaving a myometrial thickness of 1 cm below the serosa or above the endometrium. After adenomyotic lesions were removed the endometrial lining was approximated with interrupted sutures of 0 Vicryl (polyglactin 910). The myometrium and serosa of the bisected uterus were sutured with V-Loc™ (Covidien, Dublin, Ireland) by using the double-flap method.

Results

The total operation time was 55 minutes and the total of hospital stay was 24 hours. There were no complications during and after surgery. Serum hemoglobin drop level was 1.5 g/dL and there was no need for blood transfusion. The definite histopathological diagnosis was "Adenomyosis". She reported complete pain relief for her dysmenorrhea and her menstrual cycle was regulated. We have followed up for 8 months. She has not been pregnant yet. Because she stopped taking contraception pill for two months ago.

Conclusions

Laparoscopic adenomyomectomy procedure with the double-flap method may be a good therapeutic option for women with uterine adenomyosis who wishes to preserve her uterus.

<https://player.vimeo.com/video/269753746?autoplay=1>

Oncology | Cervical cancer

Clinical application value of PAX1 methylated gene for cervical cancer

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Background

For cervical cancer screening, TCT is employed and easier to interpret the testing results when compared to conventional cell smear. However due to limitation resulting from inconsistency between a cytologist's experience and judgment, sensitivity and atypical squamous cell of undetermined significance, research in new biomarker in cervical cancer could perhaps provide new testing methodology and thought, based on which we investigated the *PAX1* methylated gene, cytology, HPV high risk, and HPV16/18 in cervical cell and explored the clinical significance and clinical application of *PAX1* methylated gene in cervical intraepithelial neoplasia of women.

Methods

103 women were enrolled from Fuzhou City First Hospital from Jan. 2016 to Dec. 2016. We performed *PAX1* methylated gene, liquid-based cytology, HPV (HC2) and HPV 16/18 tests followed by colposcopy. Biopsies were taken if abnormal or suspicious colposcopic results present.

Results

The sensitivity, specificity, and accuracy of *PAX1* methylated gene for CIN2+ were 78.6%, 97.8%, and 95.1%, respectively. *PAX1* methylated gene still shows good results for clinical application on ASCUS and hrHPV triage in the study. Compared to TCT, *PAX1* methylated gene testing reduced the 20.6% colposcopy referral rate when hrHPV was used as primary screening method.

Conclusions

The accuracy of *PAX1* methylated gene testing could be used in the cervical cancer detection and triage for ASCUS and hrHPV.

Oncology | Cervical Cancer

Repair of ureteral injury and vesico-vaginal fistula after radical hysterectomy. How to manage it laparoscopically

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Background

The objective of the video is to show the surgical steps and main interesting tips and tricks in a laparoscopic vesico-vaginal fistula repair and ureteral reimplant for the management of ureteral injury in a radical hysterectomy for cervical cancer.

Methods

A 44 year-old patient underwent bilateral pelvic lymphadenectomy and radical hysterectomy for cervical cancer, previous sentinel node with Indocyanine Green mapping. In the 7th postoperative day she started complaining of abdominal pain, adinamic ileus and continuous vaginal leakage. The contrast enhanced computed tomography informed of a left uretero-vaginal fistula and a vesico-vaginal fistula. Reviewing the recordings of the surgery, a thermal lesion of the left ureter was identified.

After an initial management with percutaneous nephrostomy and bladder catheter, it was decided to perform a laparoscopic repair.

Results

Careful dissection of the firm adhesions due to a wide dissection of the retroperitoneum in the first surgery was performed.

The first surgical step was complete mobilization of the bladder by developing Retzius Space. Identification of the vesico-vaginal cleavage plane dissection was very difficult due to inflammatory response. Vesico-vaginal fistula was identified, resected and repaired. Vesical wall and vaginal wall were sutured independently.

Left ureteral attachments were dissected and a stent placed inside for achieving a tension-free uretero-vesical reimplant.

1 month after the surgery the patient underwent radiologic evaluation of the urinary system and the nephrostomy and the Foley catheter could be removed.

Conclusions

Thermal damage of the ureter is one of the main complications in complex gynecologic surgery. Laparoscopic ureteral reimplant is a feasible technique, requiring advanced laparoscopic dissection and suturing skills.

Video-registration of all the surgical procedures allows identifying complications and improving surgical skills and patient care.

Feasibility of laparoscopic extraperitoneal radical trachelectomy and pelvic lymphadenectomy in early stage cervical cancer

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Background

To evaluate the feasibility and safety of laparoscopic extraperitoneal radical trachelectomy and pelvic lymphadenectomy in early stage cervical cancer. It was A step by step demonstration of the surgical procedure.

Methods

A 30 years old patient had the symptom of contact bleeding for 2 months. No Gross lesion was found by gynecological examination. Colposcopy suggested suspicious invasive cancer. Invasive cervical papillary squamous cell carcinoma was diagnosed by LEEP. MRI suggested no parametrial infiltration and lymph nodes involvement. FIGO stage was IB1. Laparoscopic extraperitoneal radical trachelectomy and sentinel lymph node mapping were performed. However, there was no mapping on the pelvis. And pelvic lymphadenectomy was performed.

Results

The procedure was successfully completed. The operation time was 420 minutes. Estimated blood loss was 100 mL. The first evacuating time was 8 hours. The length of stay was 7 days (waiting for the pathological report postoperatively). There was no intraoperative and postoperative complication. Parametrial size bilaterally was 3cm. Vaginal cuff margin was negative. Number of lymph nodes bilaterally was 15 and they were all negative.

Conclusions

Laparoscopic extraperitoneal radical trachelectomy was an innovative fertility preserving surgery. Pelvic adhesion could be avoided due to the peritoneal integrity. It was feasible and safe.

<https://player.vimeo.com/video/266679030?autoplay=1>

Endometriosis 4

Decidualisation of endometriotic lesions in pregnancy

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Background

Endometriosis affects approximately 10% of premenopausal women. Ultrasound features of endometriosis in non-pregnant women are well described. There is paucity of data regarding prevalence and morphological appearances of endometriosis in pregnancy. The aim of this study was to identify women with an ultrasound diagnosis of endometriosis in early pregnancy and to examine the lesions for signs of decidualisation, accounting for lesion type and site.

Methods

We searched our clinic database between March 2008 and February 2017 to identify all pregnancies with evidence of concomitant endometriosis on ultrasound scan. Colour Doppler was used to assess the vascularity of endometriotic lesions.

Endometriomas were defined as ovarian cysts filled with hyperechoic fluid and surrounded by healthy ovarian tissue. Endometriotic nodules were solid, hypoechoic lesions which were fixed on palpation. Features suggestive of ovarian decidualisation were thickened irregular inner wall, papillary projections and high vascularity on Doppler examination.

Decidualised endometriotic nodules were hyperechoic lesions with moderate to high vascularity.

Results

We identified 85 women with pelvic endometriosis on early pregnancy scan. The median maternal age was 35 years (range 22 - 45). 64/85 (75.3%) were nulliparous and 15/85 (17.6%) conceived using assisted reproductive technology. The median gestational age at presentation was 7+2 weeks (range 4+0 – 19+3).

69/85 (81.2%) women were diagnosed with endometriomas [n=111 cysts], 27/85 (31.8%) with endometriotic nodules [n=52 nodules] and 11/85 (12.9%) had both cysts and nodules. 8/111(7.2%) endometriomas showed sonographic features suggestive of decidualisation compared to 12/52(23.1%) endometriotic nodules (P=0.004). In 7/8 (87.5%) women with multiple lesions and evidence of decidualisation, all lesions were affected.

Conclusions

Decidualisation of endometriotic lesions in pregnancy is relatively common. Nodules are significantly more likely to show signs of decidualisation than ovarian cysts. In some women decidualised lesions may mimic malignancy and the examiners should be familiar with these changes to avoid false positive diagnosis of malignancy and unnecessary surgical intervention

Endometriosis 4

Enhancing fertility by three compartments laparoscopic surgery of deep infiltrating endometriosis

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Background

Description of a laparoscopic technique for resection of deep endometriosis treating the three compartments. It is an educative video.

Methods

The case concerns a thirty seven years old primiparous women. The main symptoms of the patient were dysmenorrhea and dyspareunia associated with pollakiuria and macroscopic menstrual hematuria (with emission of endometriosis tissue on analysis). She also complains about dyschesia.

At the MRI we see an endometriosis nodule in the vesico-uterine space with involvement of the anterior wall of the uterus and the bladder suspicious of adenomyosis.

There are lateral spicules attracting the ovaries on the median line and infiltration of the round ligaments and nodules of endometriosis of the rectovaginal space. A possible invasion under rectal mucosa is referred. The patient wants to preserve her fertility.

An adenomyomectomy, partial cystectomy and bowel resection was realised. Fertility preservation is mandatory because of a desire of future pregnancy.

The local institutional review board approved the video.

Results

Initially, an ultrasound was realised showing the adenomyoma invading the bladder. The second step is a cystoscopic evaluation with set up of double J probe. The first step is the dissection the vesico-uterine space to dissect the anterior adenomyoma to the bladder. Then, a partial cystectomy is performed to take off the bladder nodule. The adenomyoma is resected in her uterine portion and the uterus is sutured. Surgery is then performed in the posterior compartment. Ureterolysis is performed bilaterally, then the pararectal fossae are opened. The rectovaginal space is dissected : finally a recto-sigmoidal resection is mandatory to remove the bowel nodule.

Conclusions

It is possible to realize a complete surgery of severe and deep endometriosis with multicompartimental disease in laparoscopy preserving fertility.

<https://player.vimeo.com/video/269496362?autoplay=1>

Endometriosis 4

Chocolate cystectomy - without ovarian damage

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Background

Chocolate cyst is common in younger females, where fertility is still desired. Laparoscopic management requires the cystectomy to be done adequately, thereby preventing the recurrence and refilling of the same cyst. It also proves to be a challenge in preventing the damage to the ovarian reserve.

Methods

Ovarian cystectomy is done. The complete chocolate cyst wall is removed from the ovary. Blood loss is prevented by injecting vasopressin diluted in saline into the broad ligament. Since the blood loss is minimal, it becomes easier to separate the cyst wall in the correct planes. Also, the use of energy source or cautery is not needed to control the bleeding. Both these factors help to prevent ovarian damage. Ovary is repaired by a simple purse string suture.

Results

Complete cyst wall removal is conveniently possible with the use of vasopressin. Minimal blood loss and minimal tissue handling allows the healing to be better. Ovarian reserve is not disturbed.

Conclusions

Chocolate cystectomy with complete removal of the cyst wall from the ovary is the best option for the patient. This technique allows the same, with minimal or no damage to the ovarian reserve.

<https://player.vimeo.com/video/272637678?autoplay=1>

Laparoscopy | Hysterectomy 1

Impact of uterine fibroids on quality of life: a national cross-sectional survey

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Background

Uterine fibroids is a common public health problem and lead to many symptoms. Some of them impact quality of life but published data about quality of life are scarce. Aim of this study is to provide greater details about the impact of symptoms of symptomatic uterine fibroids on women's health-related perceived quality of life regarding several dimension of their daily life.

Methods

A national sample of 1287 French women over 18 years old was recruited and investigated throughout an online survey from August 18th to September 2nd 2016, among which 302 reported being affected by symptomatic uterine fibroids and diagnosed by a healthcare professional. The questionnaire collected data regarding symptom severity of fibroids, the impact of fibroids on perceived quality of life (UFS-QoL) and the overall discomfort score. Scores are summed and transformed into a 0-100-point scale. The Symptom Severity scale and HRQL subscale scores are inversely related with higher Symptom Severity scores indicating greater symptoms while higher HRQL subscale scores indicate better health-related quality of life.

Results

Almost two surveyed women out of three (n=193; 64%) reported moderate to severe fibroids related symptoms (scores [40-100]). The global HRQL score shows that 64% of women (n=193) reported a moderate to very important impact of fibroids on quality of life. Concern, energy and self-conscious aspects of quality of life are the most affected. Women with moderate impact were 24% to self-declare an important discomfort whereas they were 57% with an important impact on global HQRL score. 25% of women rated their overall discomfort with a range from 8 to 10.

Conclusions

We observe that 64% of surveyed women reported a moderate to very important impact of fibroids on their quality of life. This perceived alteration of quality of life together with the severity of symptomatic fibroids have a significant impact on the overall level discomfort of women and on their personal life.

Laparoscopy | Hysterectomy 1

Comparison of standardized method of total laparoscopic hysterectomy and abdominal hysterectomy

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Background

Our aim was to compare the perioperative results of abdominal hysterectomies and newly introduced total laparoscopic hysterectomy (TLH) and analyze the learning curve of TLH.

Methods

Between January 2015 and September 2017, a total of 281 women underwent surgery with the intent to perform total laparoscopic hysterectomy with the obliteration of the uterine artery at its origin (TLH) or abdominal hysterectomy (AH) with the inclusion criteria, because of a benign reason or preinvasive cervical cancer with uterine weight less than 500 g.

Results

112 TLHs and 169 AHs were performed in the examined period. The two groups did not differ significantly in respect of uterine weight, BMI and age. Indications for performing hysterectomy were similar in the TLH and AH groups. According to our results, there was no significant difference in operative times (TLH: 90.6 ± 31.6 min, AH: 89.7 ± 34.2 min). When performing TLH, significantly lower hemoglobin drop ($p = 0.03$) and fewer days of hospitalization ($p < 0.0001$) can be observed. Conversion rate from TLH to AH was 4.5%. There was no significant difference in postoperative complication rate between the two groups (TLH: 3.6%, AH: 4.7%). The learning curve of TLH requires 20-30 procedures.

Conclusions

Performing the standardized method of TLH with obliteration of the uterine artery at its origin is a feasible and reproducible method with less blood loss and shorter hospitalization compared to AH. TLH is an appropriate method to reduce the numbers of AHs.

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Peer-to-peer learning: an approach to implementing laparoscopic hysterectomy in a district general hospital

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Background

Total Laparoscopic Hysterectomy (TLH) has become an important part of the specialist gynaecological training over the past 5 years. Acquisition of necessary skills within a standardised training programme can be a long and occasionally difficult process. We propose a model of peer learning where the acquisition rate of technical skills is significantly accelerated.

Methods

Data was collected retrospectively over a four-year period for the months September to November. A total of 121 TLH were identified using Enhanced Recovery After Surgery database. Patient demographic and outcome data were analysed using basic statistical analysis and comparisons were made using linear regression analysis.

Results

TLH was introduced in 2009 in Wishaw General Hospital by 2 gynaecologists with appropriate skills and training. In 2014, 8 operating surgeons teamed in groups of 2 or 3 to perform TLH. As a result, while in 2009 TLH represented less than 10% of hysterectomies, that percentage rose to 23% in 2014 and 57% in 2017. A decrease in the operative time, total blood loss, hospital stay and number of consultants present at the operation was noted while the number of intra-operative and post-operative complications remained minimal.

Conclusions

Total Laparoscopic Hysterectomy is a reproducible gynaecological procedure. The safe implementation of the procedure in a district general hospital has proven achievable using the peer learning process. It has accelerated significantly individual surgeon's technical skills acquisition and has minimised conversion rate and injuries.

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The techniques to avoid ureteral injury in total laparoscopic radical hysterectomy

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Background

As open radical hysterectomy has been widely performed for patients with early-stage cervical cancer in Japan, laparoscopic surgery for them hadn't been insured until 2017. Since 2018, we have performed total laparoscopic radical hysterectomy (TLRH) for them. Ureteral injury is serious and commonly complicated in TLRH, so it is important to avoid that. Laparoscopic approach has possibility to avoid ureteral injury more easily than open approach due to the magnified visual field of laparoscopy and pneumoperitoneum.

Methods

The most important point to avoid ureteral injury is not to injure vessels around ureter and to reduce an influence of heat from energy devices against ureter. We have performed three techniques to do that with this concept.

Tip1 : To tract bladder ventrally against uterus as possible to dissect the connective tissues around the ureteral roof. This technique enables us to thin them and find cervicovesical veins smoothly. In open approach, massive bleeding frequently occurs if they are injured. Hemostasis of them sometimes leads to ureteral injury. It is important to dissect them without injury.

Tip2 : To use clips to dissect vessels around ureter without using energy devices as possible. This technique leads to prevent an influence of heat from energy devices against ureter.

Tip3 : To make an enough distance between the dissection lines of the ureteral roof and the ureter when we create a ureteral tunnel by using atraumatic forceps. This technique reduces an influence of heat from energy devices against ureter. In open approach, it is difficult to make the distance without bleeding because it is hard to watch ureteral tunnel directly.

* We perform Tip1 and Tip3 alternately, little by little.

Results

With these techniques, we have confirmed no ureteral injury during operation and no ureteral fistula formation after operation so far.

Conclusions

Laparoscopic approach is a good method to find fine vessels correctly around ureter. These techniques are helpful to reduce an influence of heat from energy devices against ureter and prevent massive bleeding around it. Therefore, we believe that our techniques are useful to avoid ureteral injury in TLRH.

<https://player.vimeo.com/video/269744849?autoplay=1>

Laparoscopy | Hysterectomy 1

Wars in electrosurgery: comparison of the efficacy and safety of two advanced vessel sealing technologies in total laparoscopic hysterectomy

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Background

Adequately powered, randomized controlled studies evaluating efficacy and safety of the use of advanced bipolar energy devices in gynecologic laparoscopic surgery are very few.

Methods

This randomized controlled trial was carried out in the department of obstetrics and gynecology in an education and teaching hospital. we aimed to compare the use of two advanced bipolar devices in total laparoscopic hysterectomy with respect to operative time, total operative time, intraoperative blood loss, and perioperative complications and to determine the effect of uterine weight on these surgical parameters. devices included ligasure® maryland jaw 5 mm laparoscopic instrument (ligasure; lf1737, medtronic, minneapolis, mn, usa) using the forcetriad energy platform (medtronic, boulder, co, usa) and enseal® g2 articulating straight 5mm tissue sealer (enseal; nslg2S35a, ethicon endo-surgery, cincinnati, oh, usa) using the ethicon gen11 generator (ethicon endo-surgery, us, llc). one hundred thirty-two patients who underwent total laparoscopic hysterectomy for benign indications were included in the study. patients with age younger than 18 years and suspected malignancy were excluded. patients were randomized preoperatively to ligasure® or enseal® to be used during the operation. one experienced surgeon performed all the operations.

Results

Ligasure® was used in 67 patients and enseal® was used in 65 patients. all the operations were completed laparoscopically. primary outcome of the study was operative time (time from start of sealing and transection of the round ligament until start of colpotomy) and secondary outcomes were total operative time (time from placement of the first trocar until removal of all trocars), intraoperative blood loss and perioperative complications (visceral or vascular injury, hemorrhage, conversion to laparotomy or to another instrument, device failure, wound infection, ileus). statistical analysis was performed using the t-test for normally distributed data, chi-squared test for categorical data, and mann-whitney u-test for nonparametric data. there were no differences in age, body mass index, parity, operation indication, history of prior surgery, presence of chronic diseases, and uterine weight between two groups. both operative time and total operative time were significantly shorter in the ligasure® group when compared with the enseal® group ($p= 0.001$ and $p=0.01$ respectively). intraoperative blood loss and perioperative complications were similar in both groups. when two groups were further classified into two subgroups according to uterine weight taking 300 g as cut-off value, operative time was significantly shorter in the ligasure® group in both uterine weight subgroups ($p=0.03$ and $p=0.07$) but the difference in total operative time was not statistically significant.

Conclusions

Ligasure® use in total laparoscopic hysterectomy shortens both operative time and total operative time when compared with enseal®; without an apparent increase in blood loss and perioperative complications. ligasure® use shortens operative time irrespective of uterine weight; however for uteri weighing above 300 g, total operative time is similar in both devices.

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Laparoscopy | Hysterectomy 1

TLH - Bladder injury and repair - surgical concepts

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Background

Laparoscopic hysterectomy is associated with bladder injury quite frequently. Either this comes as a delayed complication due to ischemic trauma or on table as an immediate complication, requiring surgical repair. Here we will present the on table opening up of the bladder and the surgical concepts in bladder repair.

Methods

Laparoscopic hysterectomy being done with the latest technology of ultrasonic and vessel sealer energy combined and high definition vision system. Still bladder injury can happen leading to opening of the bladder in the case of previous cesarean delivery. The opened bladder requires repair once the hysterectomy is completed. The surgical concepts are described in the video.

Results

On table identification of the bladder injury and prompt repair gives good outcome for the patient. Opening the bladder cannot be prevented in each and every case, but proper repair allows the situation to be dealt with without any further complications.

Conclusions

Simple surgical steps in the bladder repair need to be followed for assured healing and prevention of further compounding of the complication.

<https://player.vimeo.com/video/272629982?autoplay=1>

Hysteroscopy 1

Different techniques for removal of endometrial polyps: clinical results from an Italian multicentre trial

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Background

A multicenter, prospective observational trial was conducted in 19 Italian Gynecologic Departments (University-Affiliated or Public Hospitals). The endpoint of the study was to establish the most effective and safe technique of hysteroscopy polyp resection carried-out as a single surgical step.

Methods

We recruited 1519 consecutive of patients with or without AUB, presenting one or more endometrial polyps, measuring more than 10 mm in the largest diameter and treated by hysteroscopic technique.

Various techniques of polyp resection were used, according to the custom, to the available instrumentation and to the skills of each participating center.

Results

The prevalence of malignancy or atypical hyperplasia was 1.91% (95% CI: [0.88%; 2.94%]) in patients with symptoms and 2.27% (95% CI: [1.26%; 3.28%]) in those without symptoms. In 15 patients (0.99%), the histologic diagnosis was endometrial polyp with adenocarcinoma, and in 17 patients (1.12%) the diagnosis was atypical hyperplastic endometrial polyp. The prevalence of malignancy or atypical hyperplasia was 0.435% (95% CI: [0; 0.93%]) in premenopausal patients, 3.6% (95% CI: [2.32%; 4.89%]) in postmenopausal patients. There was significantly more malignancy in the postmenopausal group compared with the premenopausal group ($p = 0.00207$), according to a z-test for the difference of proportions (with pooled variance).

Finally, the prevalence of malignancy or atypical hyperplasia in patients with small polyps (with size smaller than 18 mm) was 1.71% (95% CI: [0.88%; 2.55%]), while in patients with large polyps (bigger than 18 mm) was 2.73% (95% CI: [1.41%; 4.05%]), but this difference was not significant ($p = 0.1797$). Abnormal uterine bleeding (irregular bleeding, heavy bleeding, or postmenopausal bleeding), was present in 43.27% of the patients. Altogether, 838 of the patients were symptom free (55.17%).

In 1371 patients (97.65%), the polypectomy was performed without complications.

Intraoperative perforation of the uterine wall without need of further procedures and with completion of the resections occurred in 3 patient (0.21%). No late complications occurred.

Median length of follow-up for the study population was 3 months. Persistence was confirmed in 39 cases (2.78%) by histologic analysis.

Conclusions

Correlation between persistence and operative setting (office or operating room), instrumentation used, modality of resection, location of the polyp and center for data collection showed a significant association to the instrumentation used, to the polyp location, and to the center for data collection. According to a further association test, significantly more persistence was associated to the use of AlphaScope, and to the provenance from 2 out of the 19 centers, whereas the location more frequently associated with the persistence of the polyp was the right tubal corner (5.26% of the patients who had the polyp in this location had a persistence), whereas isthmic location was associated with no persistence.

Comparing mechanical resection with electric and laser resection gave no significant association to persistence of the polyp (chi-squared test, $p = 1$).

Hysteroscopy 1

The high prevalence of hyperplasia and cancer in endometrial polyps in women with postmenopausal bleeding (PMB) justifies removal – Systematic Review and Meta-analysis

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Background

There is lack of consensus amongst gynaecologists as whether benign-looking endometrial polyps ought to be removed in women with PMB. There is no evidence from randomized controlled trials. Most of the observational studies, reporting prevalence, risk of malignancy and management, included a mixture of pre- and postmenopausal women both symptomatic and asymptomatic. This review was conducted to quantify the prevalence of hyperplasia and cancer to help inform clinical practice as whether benign-looking endometrial polyps ought to be removed when first diagnosed or expectant management could also be offered.

Methods

We searched the published literature using strategies developed by a medical librarian using a combination of standardized terms and key words and were implemented in PubMed, EMBASE and clinicaltrials.gov. Search was limited to primary human research published in English language and reporting endometrial polyps in women with PMB till 31st December 2017. The standard of the Meta-analysis Of Observational Studies in Epidemiology (MOOSE) was followed. Endometrial atypical hyperplasia was combined with cancer as a single category because of high rates of concurrent (42.6%) and progression (28%) to cancer. Endometrial hyperplasia without atypia was also included, despite the low progression rate of <5% over 20 years, considering the recent Guidelines of the Royal College of Obstetricians and Gynaecologists. The prevalence of hyperplasia and cancer was estimated with a random effect model using the method of DerSimonian and Laird. Exact confidence intervals (CI) were calculated for the individual studies. Heterogeneity was assessed using the I^2 statistic and calculation of 95% prediction intervals for the response proportion in a new study. The possibility of small study effects was assessed by asymmetry of funnel plots and the potential impact quantified using the Duval and Tweedie nonparametric "trim and fill" method.

Results

The number of retrieved studies was 4025. After removing the duplicates and performing the title and abstract filtering, 37 full text papers were identified. We excluded 17 papers for not reporting a separate group for PMB women, and 12 for mixing tamoxifen users with none users. The remaining 8 studies were included in the analysis. The pooled estimate of prevalence and 95% CI were 8.5% (6.2%, 10.8%). Adjustment for small study effects lead to a slightly lower estimate of 7.3% (4.7%, 9.9%). An I^2 statistic of 59% is suggestive of likely moderate heterogeneity. This is likely to be clinically important as the between study standard deviation was 2.4%, and a 95% prediction interval suggests that the prevalence in a new study might lie between (1.9%,15.2%).

Conclusions

The high prevalence of hyperplasia and cancer in benign-looking endometrial polyps in women presenting with PMB warrants removal until robust hysteroscopic morphological criteria, that can reliably predict the outcome, are established in future research.

Hysteroscopy: Outpatient | Office Hysteroscopy

A UK-based national audit of outpatient hysteroscopy services (OPH)

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Background

Hysteroscopy is the gold standard for the diagnosis and treatment of uterine pathology which can be carried out under general anaesthetic or in an outpatient setting. Outpatient hysteroscopy is well-established as a safe, reliable, cost-effective endoscopic procedure with high patient satisfaction rates. In United Kingdom (U.K) these services are provided by the National Health Service (NHS). The British Society for Gynaecological Endoscopy (BSGE) together with the Royal College of Obstetricians and Gynaecologists (RCOG) has published guidance for standards as best practice in hysteroscopy. It is not clear if current practice meets the recommended standards. Therefore, the aim of this national audit was to provide a scoping view of current practice in outpatient hysteroscopy to improve clinical services.

Methods

All BSGE members were first invited to participate in an electronic audit in March 2018 with a reminder sent out in April 2018. The audit consisted of four key areas: (1) hospital details; (2) existing outpatient hysteroscopy services (i.e. clinics, staffing, facilities and equipment); (3) procedural practices (i.e. patient consent, cervical preparation, anaesthesia, hysteroscopy methods); (4) clinical governance practices (i.e. audit, safety, patient feedback).

Results

141 responses were obtained from respondents employed by 86 NHS Trusts (100 hospitals) offering hysteroscopy services across England, Wales and Scotland. All respondents provided a dedicated hysteroscopy service with more than 70% providing care to over 500 women per annum. 73% of respondents routinely offered women a choice of setting for diagnostic hysteroscopy. A dedicated hysteroscopy suite was used by 79% of the respondents. Only 75% of respondents felt that patient facilities were adequate although 91% and 86% felt well-equipped to perform diagnostic and operative hysteroscopy respectively. The majority (97%) provided leaflets and advised women to take analgesia before their appointment. Contrary to best practice standards, vaginoscopy was reported as the only preferred approach by 42% of the respondent. Less than half respondents (41%) stated that a local anaesthetic protocol for the use of anaesthesia during hysteroscopy was available. The majority of the respondents (85%) routinely collected patient feedback. Most respondents (91%) reported routine collection of data for patient safety and 78% annually audited their hysteroscopy services.

Conclusions

The responses received have highlighted inconsistencies in the delivery of outpatient hysteroscopy across the UK and compliance with evidence-based best practice guidelines. The audit did not examine the reasons for these variations but they may be attributed to financial constraints, service pressures and lack of skilled, trained staff. In light of the increasing use of outpatient hysteroscopy in contemporary gynaecological practice, it is of urgent importance to address the areas of suboptimal practice identified to ensure the more uniform delivery of high quality, safe and effective care.

Hysteroscopy: Outpatient | Office Hysteroscopy

Management of retained products of conception in office setting. The role of the 5.7 mm Intrauterine Tissue Removal System.

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Background

To evaluate the hysteroscopic management of retained products of conception (RPoC) in our department in the last 10 years.

Methods

Retrospective descriptive analysis of the hysteroscopic management of RPoC comparing two periods of time: before and after the introduction of the intrauterine tissue removal system of 5.7 mm (IUTRS) in our department.

Results

Between May 2008 and March 2018, 113 cases of retained products of conception were diagnosed. 58% after miscarriage, 24.8% after vaginal delivery, 11.5% after termination of pregnancy, 4.8% after caesarean section and 0.9% after cervical ectopic pregnancy. 105 procedures were performed in Office Setting and 8 in Operating Theatre as Day Case Surgery. Between March 2008 and December 2011, 20% of the cases were performed in Operating Theatre as Day Case Surgery and 80% in Office Setting; 56.3% of these cases were resolved in Office Setting with the use of mechanical instruments (grasping forceps) and the remaining 43.7% required surgical hysteroscopy in the Operating Theatre.

From January 2012 to March 2018, the period in which we have used the 5.7 mm IUTRS, in 4% of the cases a Operative Hysteroscopy in Operating Theatre was indicated and in the remaining 96%, the procedure was performed in Office Setting; of these, 97.8% of the cases were resolved in Office Setting and only the remaining 2.2% required an additional procedure in Operating Theatre (1 dilatation & curettage and 1 Operative Hysteroscopy). Of the procedures resolved in Office setting in this last period, 23% were performed with mechanical instruments (grasping forceps) and 77% with the 5.7 mm IUTRS. The average volume of the samples obtained with the IUTRS was 4.3 cm³(0.03-32) versus 0.96 cm³(0.008-15) of those removed with grasping forceps. The average ultrasound diameter of the remnants managed with the IUTRS was 16.7 mm (3-41) versus 9.86 mm (1-24) of those removed with mechanical instruments.

The tolerance of the procedures in Office Setting was good in 96% of the cases. Only 2 cases required Hospital admission. Neither infectious complications, nor cases of Asherman´s Syndrome were recorded. In the patients in whom a 2nd look was performed, no adhesions were observed. Since 2015 hyaluronic acid has been used to prevent their development.

Conclusions

The management of retained products of conception has changed in our Department since the introduction of the 5.7 mm Intrauterine Tissue Removal System and, in our experience, most cases can be safely and satisfactorily resolved in Office Setting.

Hysteroscopy: Outpatient | Office Hysteroscopy

Reproductive outcomes and tolerability of office hysteroscopy. Prospective observational study

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Background

It is assumed that minimal traumatization of the endometrium during office hysteroscopy (OH) increases the chances of attaching a fertilized ovum.

Methods

Assessment of the pregnancy rate, impressions of pain by a 10-point pain VAS scale during menstruation, at diagnostic and surgical stage of OH. Intervention: OH without anesthesia, removal of intrauterine pathology, endometrial biopsy, recanalization of tubal ostia, performed by one doctor, in one clinic. Equipment and parameters: hysteroscope d 3.8 mm, intrauterine pressure 50-70 mm.hg. 101 out of 120 patients were interviewed, 19 patients (pts) were excluded from the study. Study groups: 1 - did not plan pregnancy (43 pts, 42.6%), 2 - planned pregnancy (58 pts, 57.4%), inside of which: 2a - planned pregnancy naturally (42 pts, 72.4%), 2b - had indications for ART (16 pts, 27.6%). Retrospective standardized telephone interview 6 months or more after OH. The interview was conducted by a gynecologist who had never previously contacted the study participants. Satisfaction score on a 5-point scale. Statistical processing by "Statistica 10".

Results

VAS pain during menstruation in group 1 - 2, 53 ± 0.84 , 2st group - 3.67 ± 0.34 , group 2a - 3.5 ± 0.39 , group 2b - 4.12 ± 0.67 . VAS pain at the diagnostic stage 1.74 ± 0.32 ; 1.81 ± 0.24 ; 1.67 ± 0.25 ; 2.18 ± 0.6 , respectively. VAS pain at the operational stage 3.07 ± 0.45 ; 3.65 ± 0.35 ; 3.69 ± 0.41 ; 3.56 ± 0.62 , respectively. Statistically significant differences were not detected ($p > 0.05$). There was statistically significant difference of pain level revealed within the groups of menstruation, diagnostic and operative stages of the OH ($p < 0.05$). In group 2a, out of 42 pts, 25 (60.0%) became pregnant, 2b - of 16 pts, 4 (25%) became pregnant. The level of satisfaction was in 1st group - 4.79 ± 0.1 ; 2nd group - 4.87 ± 0.05 ; group 2a - 4.85 ± 0.07 ; group 2b - 4.93 ± 0.06 . Statistically significant differences were not detected ($p > 0.05$).

Conclusions

OH - well tolerated by patients. The level of pain experienced by women during menstruation is significantly higher than in the diagnostic and operative stages of OH. OH, accompanied by the removal of pathological formation, endometrial biopsy and recanalization of the tubal ostia, increases the chances of becoming pregnant in patients who do not have indications for the ART, but who have not become pregnant for a long time because of the presence of certain pathologies in the uterine cavity.

Hysteroscopy: Outpatient | Office Hysteroscopy

Fertility and obstetrical outcome after hysteroscopic removal of retained products of conception (loop resection versus morcellation)

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Background

To conduct a follow-up study considering the reproductive and obstetrical outcome in a cohort treated for retained products of conception (RPOC) by hysteroscopy (loop resection versus morcellation).

Methods

In April 2018 the patients included in a previous randomised controlled trial, comparing loop resection (n=40) with morcellation (n=46) for the removal of RPOC between 2011 and 2015, were reviewed for reproductive and obstetrical outcome. The primary outcome measures were live birth and pregnancy complications, subdivided into uterine rupture, abnormal placentation (including placenta accrete / increta / percreta / previa, vasa previa and RPOC 6 weeks after the delivery) and other complications (blood loss in the first, second and/or third trimester, preterm contractions, preterm premature rupture of membranes (PPROM), hypertensive disorder of pregnancy and/or intrauterine growth restriction (IUGR)). The secondary outcome measure was time to conception.

Results

The response rate was 75% (30/40) for loop resection and 85% (39/46) for morcellation. The median follow-up was 5 years (interquartile range (IQR) 4 - 5), and 70% (48/69) wished to conceive after the hysteroscopic removal of RPOC. For both techniques, the median age of women wishing to conceive was 37 years (IQR 32 – 39, and IQR 33-40 for respectively morcellation and loop resection). In the intention-to-treat analysis, the expected adjusted odds for live birth (100% for morcellation versus 79% for loop resection) were 11.82 times higher in the morcellation group (P = 0.04). Uterine rupture occurred only in the morcellation group in 4% (1/24) of the women, this was a patient with a hemiuterus in whom perforation occurred during dilation (P = 1.0). Abnormal placentation was found in 21% (5/24) and 24% (4/17) (P = 1.0), and other pregnancy complications in 35% (8/23) and 13% (2/16) (P = 0.1) for respectively morcellation and loop resection. The median time to pregnancy was 14 weeks (IQR 5 – 33) in the morcellation group and 15 weeks (IQR 5 – 39) in the loop resection group (P = 0.96).

Conclusions

Hysteroscopic resection of RPOC, using loop resection or morcellation, seems to have no detrimental effect on reproductive outcome. Moreover, the live birth seems to be higher in the morcellation group. Uterine rupture can occur after entry-related perforation in a congenitally abnormal uterus. One in 5 women seem to have abnormal placentation after hysteroscopic removal of RPOC.

Hysteroscopy: Outpatient | Office Hysteroscopy

Performance and effectiveness of the Librata endometrial ablation system

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Background

Objective: To evaluate the performance and effectiveness of the endometrial ablation device Librata in an outpatient setting.

Methods

Prospective evaluation of 18 patients undergoing endometrial ablation with LiNA Librata in an outpatient setting. All patients had refractory heavy menstrual bleeding with no definable organic cause. Preprocedural hysteroscopy, endometrial biopsy or pelvic ultrasound showed no endometrial or uterine cavity abnormalities. Endometrial thinning was performed. The anaesthesia regimen included oral analgesia, cervical or spinal block and iv. sedation. Procedural pain scores were obtained using a 10-point visual analogue scale. A device performance form was completed after each procedure. Menstrual loss was measured by menstrual pictogram at 1, 3 and 6 months. Patient Satisfaction and Health Related Quality of Life (Menorrhagia Multi-attribute Assessment Scale, MMAS) were assessed at 6 months. Treatment side effects and treatment failures were also recorded.

Results

The mean age of the study group was 42, the mean BMI was 28 and the median number of parity was 2. All patients suffered from dysmenorrhea, 83% (15/18) reported premenstrual symptoms and 22% (4/18) were anaemic. The procedure was completed without complications in all patients. The overall performance of all devices was rated as excellent. Patients received cervical dilatation to an average (SD) of 6,5 (0,17) mm. The treatment time with the device is 126 seconds, the mean (SD) procedure duration was 165 (21) seconds. The mean (SD) pain score was 2,9 (2,5). All patients tolerated the procedure with none being abandoned due to discomfort. Average time spent in the recovery room was 1h 13 min and all patients were discharged at the day of the procedure. 3 months after the procedure 94% had reduced menstrual blood loss (17/18) including 56% with amenorrhoea (10/18). After 6 months all patients reported reduced blood loss and the amenorrhea rate was 44% (7/16). All patients reported that their symptoms of dysmenorrhea had improved (16/16). Premenstrual symptoms were improved in 53% of the patients (8/15). All patients were very satisfied (10/16), satisfied (4/16) or fairly satisfied (2/16) with the procedure. Mean total MMAS scores were improved from 39,7 at baseline to 89,5 at month 6. Improvements were observed in all MMAS domains (practical difficulties, social life, family life, work and daily routine, psychological well-being, and physical health). No patient required further treatment. There were no adverse patient consequences due to the procedures.

Conclusions

The Librata endometrial ablation device is an effective treatment for abnormal uterine bleeding and feasible in an outpatient setting.

Hysteroscopy: Outpatient | Office Hysteroscopy**Hysteroscopy findings in postmenopausal women: Does being symptomatic matters?**

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Background

Postmenopausal ultrasonographic endometrial evaluation is a part of routine gynecological examination. Either symptomatic or not, hysteroscopy is the best tool for optimal assessment of endometrial pathologies (1,2). Herein we reported histopathological examination results of 65 postmenopausal women, 30 symptomatic (postmenopausal bleeding) and 35 asymptomatic [thick endometrium (>4 mm) in ultrasonography], whose endometrium were evaluated by office hysteroscopy.

Methods

65 women who were admitted to gynecology department due to postmenopausal bleeding or routine control, who were evaluated by hysteroscopy due to postmenopausal bleeding n=30) or thick endometrium (>4 mm) (n=35) were included in the study. Four mm is the suggested cut off value by ACOG for 'postmenopausal thick endometrium' (1). Office hysteroscopy was held by vaginoscopic approach and intraoperative (macroscopic evaluation by the surgeon) and postoperative (histopathological evaluation by the pathologist) evaluations were recorded.

Results

The intra- and postoperative characteristics of all participants are given in Table 1. Among 30 symptomatic women with postmenopausal bleeding and evaluated by hysteroscopy, 28 were reported to have benign pathological result while one had hyperplasia and one had endometrioid adenocarcinoma. The remaining 35 asymptomatic women with thick endometrium, two had hyperplasia (one case with atypia and one without atypia) and one had endometrioid adenocarcinoma. Intraoperative and postoperative diagnosis concordance was 70 % (21/30) for women in the symptomatic group while the same value was 91 % (32/35) for the asymptomatic group.

Table 1: Intraoperative and Postoperative results of cases

Findings	Hysteroscopy Indication			
	Postmenopausal Bleeding (n=30)		Thick Endometrium (n=35)	
	Intraoperative (Hysteroscopy)	Postoperative (Histopathology)	Intraoperative (Hysteroscopy)	Postoperative (Histopathology)
Normal	11 (36%)	17 (57%)	11 (31%)	10 (28%)
Polyp	17 (57%)	10 (33%)	20 (57%)	19 (54%)
Mucoid Material		2 (7%)		1 (3%)
Leiomyoma	1 (3%)		3 (9%)	2 (6%)
Hyperplasia	1 (3%)		1 (3%)	1 (3%)

Hyperplasia with Atypia		1 (3%)
Endometrial Adenocarcinoma	1 (3%)	1(3%)

Conclusions

Postmenopausal women with postmenopausal bleeding or thick endometrium need to be evaluated and hysteroscopy is one of the alternative methods for this group of patients (1,2). First of all, endometrium cancer has to be ruled out by histopathology. Vaginal bleeding is the presenting sign in more than 90% of postmenopausal women with endometrial carcinoma (1) but as the current study supports, clinicians dealing with menopausal cases should have the same sensibility for asymptomatic cases with thick endometrium. In conclusion, hysteroscopy is an easy, highly tolerable procedure for histopathological biopsy guidance in this group of patients.

Hysteroscopy: Outpatient | Office Hysteroscopy

The leiomyosarcoma incidence among patients who underwent myomectomy and/or hysterectomy for myoma uteri: 15 - year experience in a tertiary single center

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Background

Uterine leiomyomas are the most common benign pelvic tumors in women, with a lifetime prevalence of 12% to 80% . The presence of undiagnosed leiomyosarcomas in specimens has been documented as a major concern by physicians. In this presentation we aimed to present the estimation of the incidence of uterine sarcoma and leiomyosarcoma in women undergoing myomectomy and/or hysterectomy for presumed leiomyomas. Our surgical statistics and brief results were listed.

Methods

This retrospective study was conducted in Ege University School of Medicine Department of Obstetrics and Gynecology. Myomectomy and/or hysterectomy specimens which were finally resulted in leiomyosarcoma were recorded between 2002-2017. Patient's numbers (myomectomy = 1740, hysterectomy for presumed myoma = 1706), patient's age, parity, body mass index (BMI), myoma size and number, pre-operative clinical findings, ultrasonographic features, tumor marker levels, hysterectomy types, intra-operative and final pathological results were recorded from the electronic patient file.

Results

Average ages of patients were determined as 52.9 (range 48 - 70) and 36.4 (range 32 - 44) in hysterectomy and myomectomy groups respectively. The mean of parity was 2.5(range 2-5). Mean BMI was 25,24kg/m²(range 21,10 - 31,48). Total abdominal hysterectomy and bilateral salpingo-oophorectomy were done in 1703 patients in hysterectomy group. Remaining 3 patients were undergone bilateral pelvic lymphadenectomy additionally during first surgery due to leiomyosarcoma. Abdominal and hysteroscopic myomectomy were applied in 826 patients in myomectomy group. 2 of those patients were undergone second look laparotomy due to high-grade leiomyosarcoma. Laparoscopic myomectomy was performed to remaining 914 patients. All of patients final pathology was reported as leiomyoma in laparoscopy group. Average myoma size was determined as 5x6 cm (range 3x4 – 9x12). CA 125 level was determined as higher than normal in 260 (7%) of the patients. All patient's (n=2) myomectomy material's frozen-section results were malignant (leiomyosarcoma) in myomectomy group.

Conclusions

The overall incidence of occult leiomyosarcomas is very rare (0,17%)in our retrospective data. A gynecologist can continue to offer patients minimally invasive route for myoma and/hysterectomy management.

ES27-0198 -

Laparoscopy | Robotic Surgery

New robotic single-site myomectomy suture techniques

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Background

With the introduction of the robotic single-site platform, surgeons are able to perform minimally invasive surgery. However, surgical challenges still exist due to the limitation of movement and fighting of single-site instruments. In order to perform successful and more robotic single-site myomectomy, we must develop good surgical skills and better suturing techniques with the current set of limited instruments.

Methods

Based on my experiences performing more than 48 cases of robotic single-site myomectomy from Dec. 2014 to Apr. 2016, I introduced and used the new suture techniques and performed 54 cases from May. 2016 to Feb. 2018.

Results

The new surgical tips for myomectomy suturing techniques as well as vault suturing technique was screwing of the needle driver, suturing technique from deep inner and the transverse direction by increasing angle approach, dragging and making an adequate loop of thread, and creating united strength with each instrument.

When following these steps, I have made adequate and firm sutures of myometrium layer by layer in robotic single-site myomectomy and overcome suturing limitations of robotic single-site surgery with these steps

Conclusions

With new suture techniques, robotic single-site myomectomy can be easily performed with good approximation of uterine muscle layers.

Laparoscopy | Robotic Surgery

Deep infiltrating rectal and vaginal endometriosis : robotic-assisted shaving

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Background

Deep infiltrating endometriosis (DIE) is defined as endometriotic tissue composed of endometrial glands and stroma infiltrating the anatomical underlying structures and organs by at least 5 mm. Affected patients, usually of reproductive age complain about pelvic pain, intestinal, urinary, sexual disorders and infertility. The treatment options consist in a combination of medical therapy and pelvic surgery.

Laparoscopic eradication of DIE had proved to be efficient in improving quality of life and should be conservative but as complete as possible during the first surgery to avoid recurrence of pain as well as reintervention with risk of irreversible pelvic damages.

Robotic-assisted laparoscopy offers superior high-definition 3-D vision, motion scaling and wristed instruments facilitating the challenge of DIE surgical treatment to restore normal anatomy with pelvic organ preservation.

Methods

A step-by-step surgical tutorial to show a rectal and vaginal robotic-assisted shaving in DIE.

Patient

A 36-year-old woman, G4P4, complaining of dysmenorrhea (Visual Analogue Scale, VAS 10/10), dyspareunia (VAS 8/10), dyschezia (VAS 6/10) and constipation resistant to hormonal treatment. Transvaginal ultrasound showed a complete obliteration of Douglas pouch with DIE affecting the anterior rectal wall, the posterior vaginal wall, both uterosacral ligaments, the left posterior broad ligament and the left ovary.

Results

The procedure used a 8-mm camera port through the umbilicus, 2 ancillary 8-mm robotic ports, and a 5-mm assistant port (Da Vinci Xi Robot). Using a fully robotic approach, tailored dissection close to the endometriotic lesions allows nerve-sparing DIE eradication with minimal opening of pararectal space and without uterolysis. The surgical steps permits excision of the endometriotic rectal nodule with preservation of the vagina and rectal wall.

Conclusions

A robotic-assisted eradication of rectovaginal DIE can be performed safely and effectively. The technique offers great accuracy and comfort for the surgeon in rectal sparing procedures.

<https://player.vimeo.com/video/272662370?autoplay=1>

ES27-0251 –

Laparoscopy | Robotic Surgery

Robotic management of vascular entrapment

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Background

The robotic approach to the aberrant vessels entrapping the nerves of the sacral plexus.

Methods

A step-by-step explanation of the surgery using video

Results

The operation was completed successfully without any complication and the patient reported no pain after 1 month of the surgery.

Conclusions

Compression of the sacral plexus by aberrant vessels is a less known cause of the chronic pelvic pain. Laparoscopic management of vascular entrapment of the sacral plexus was described by Possover et al and Lemos et al . We manage this vessels by robotic approach.

<https://player.vimeo.com/video/269929355?autoplay=1>

Oncology: Endometrial Cancer

Cetorelix promotes cell apoptosis by upregulating forkhead box O1 through PI3K/Akt signal pathway in epithelial ovarian cancer

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Background

To investigate the apoptosis effect of cetorelix, a GnRH antagonist, on epithelial ovarian cancer (EOC) cells and the involved mechanism *in vitro* and *in vivo*. Furthermore, we explored the expression pattern and clinical significance of FOXO1.

Methods

A series of *in vitro* and *in vivo* experiments were performed to elucidate the function and mechanism of cetorelix on the apoptosis of EOC. The expression of FOXO1 in EOC tissues and its correlation with clinicopathological factors and prognosis was examined.

Results

Both *in vitro* and *in vivo*, cetorelix promoted EOC cell apoptosis. Through human apoptosis gene PCR array, we verified that the promotion of apoptosis by cetorelix was linked to upregulation of members of the tumor necrosis factor (TNF) and TNF receptor super families, which have been identified as downstream targets of forkhead box O1 (FOXO1). Cetorelix enhanced FOXO1 expression, and siRNA-mediated knockdown of FOXO1 abrogated the induction of apoptosis by cetorelix. Furthermore, cetorelix decreased p-AKT expression, and FOXO1 upregulation by goserelin was dependent on the PI3K/Akt pathway. *In vivo*, the expression trend of key factors in this pathway was consistent with that observed *in vitro*. In EOC tissues, The low-expression of FOXO1 was highly correlated with FIGO stage, distant metastasis and reduced two-year survival rate.

Conclusions

our data suggest that cetorelix may promote EOC cell apoptosis by upregulating FOXO1 through the PI3K/AKT signaling pathway. FOXO1 may be potential therapeutic targets for the treatment of EOC. GnRH antagonists may also be potential antitumor agents.

Oncology: Endometrial Cancer

Circulating serum exosomal ANRIL is a novel prognostic marker for epithelial ovarian cancer

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Background

Epithelial ovarian cancer (EOC), which has a poor five-year survival rate of only 30%, is the deadliest gynaecological cancer. Recently, circulating exosomal long noncoding RNAs (lncRNAs) have emerged as novel non-invasive and stable prognostic biomarkers for cancer. However, little is known about their potential roles as prognostic biomarkers in EOC. This study focused on exosomal lncRNA-antisense non-coding RNA in the INK4 locus (ANRIL) and aimed to explore its potential as a predictive marker for EOC prognosis.

Methods

Exosomes were isolated from serum samples collected from 74 EOC patients and 30 healthy controls. Exosomes were identified using transmission electron microscopy (TEM), nanoparticle tracking analysis (NTA) and western blotting. Clinicopathological correlation were analysed using chi-square or Fisher's exact tests. Overall survival (OS) and disease-free survival (DFS) analyses were calculated using the Kaplan-Meier method and the log-rank test. Multivariate survival analyses were performed using Cox regression models. A predictive model was constructed based on significant variables in the multivariate analysis by R version 3.4.3 (<https://www.r-project.org/>), and Harrell's concordance index (c-index) was used to assess its predictive efficiency.

Results

Based on TEM and NTA, we observed that the exosomes exhibited a round-shaped appearance (30-150 nm in diameter). Western blot analysis confirmed the presence of four well-known exosomal markers, CD63, TSG101, Hsp 70 and Hsp 90, indicating that the exosomes were isolated successfully. Further, we found that ANRIL could be detected in the exosomes of serum collected from EOC patients. The serum exosomal ANRIL expression in EOC patients was significantly higher than that in controls. Clinicopathological correlation analysis revealed that high exosomal ANRIL levels were associated with an advanced Federation of Gynecologists and Obstetricians (FIGO) stage, a high histological grade and lymph node metastasis. Kaplan-Meier analysis indicated that EOC patients with higher exosomal ANRIL levels had poor OS and DFS. Multivariate survival analysis demonstrated that exosomal ANRIL was an independent prognostic factor for EOC OS and DFS independent of FIGO stage and lymph node metastasis. Moreover, to precisely predict EOC prognosis, a prognostic nomogram model was constructed using the significant factors, including serum exosomal MALAT1 level, FIGO stage and lymph node metastasis. The model showed a good prediction of the probability of 3-year OS and DFS for EOC patients according to the c-index and calibration curve.

Conclusions

Serum exosomal ANRIL is a novel promising biomarker for the prediction of EOC prognosis.

Oncology: Endometrial Cancer

Long non-coding RNA LA16c-313D11.11 derived miR-205-5p modulates human endometrial cancer by targeting PTEN

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Background

This study was to investigate the role of lncRNA LA16c-313D11.11 associated competitive endogenous RNAs (ceRNAs) network in the endometrial cancer (EC). And it also was to confirm the functional significance of LA16c-313D11.11 and miR-205-5p on the proliferation and migration in the endometrial cancer.

Methods

A total of 60 primary endometrial cancer tissues and 20 normal endometrial tissues (NE) were recruited into this study. NE was obtained from women who underwent a hysterectomy or endometrial curettage for endometrial-unrelated diseases (such as uterine myoma or prolapse). The expressions of LA16c-313D11.11, miR-205-5p and PTEN in human endometrial cancer tissues were determined by RT-PCR and qRT-PCR. LA16c-313D11.11 mimic, miR-205-5p inhibitor and negative control were transfected into Ishikawa and HEC-1A cells. The expression of LA16c-313D11.11, miR-205-5p and their targets were assessed by RT-PCR, qRT-PCR and western-blot. Functional significance of LA16c-313D11.11 and miR-205-5p on tumor proliferation and migration in vitro were examined by CCK-8, flow cytometry, wound healing and transwell assays.

Results

LA16c-313D11.11 expression was significantly decreased both in human EC tissues (n=60) and cell lines (Ishikawa and HEC-1A) compared with the control. miR-205-5p expression was significantly increased, and the mRNA and protein expressions of PTEN were markedly reduced in EC tissues and cell lines compared with the control. Moreover, LA16c-313D11.11 expression was negatively related to miR-205-5p in human EC tissues (n=60). Our results also showed that LA16c-313D11.11 overexpression considerably attenuated the viability, migration and invasion of Ishikawa and HEC-1A cells in vitro. miR-205-5p descending expression also considerably attenuated the viability, migration and invasion of Ishikawa and HEC-1A cells in vitro. In addition, through its miRNA response elements (MREs) to compete for miR-205-5p, LA16c-313D11.11 was confirmed to regulate the expression of PTEN and the viability, migration and invasion of Ishikawa and HEC-1A cells in vitro. LA16c-313D11.11 was also confirmed to regulate the expressions of PDK1, AKT, p-AKT and Caspase-3. It was the effective ceRNAs associated with the miR-205-5p-PTEN network.

Conclusions

We for the first time identify that LA16c-313D11.11 is effective ceRNAs associated with miR-205-5p-PTEN network. To our knowledge, it is also the first time to demonstrate that LA16c-313D11.11 regulates EC development by deriving miR-205-5p and provide important clues for understanding the key roles of lncRNA-miRNA functional network in EC. It also improves our understanding of the molecular mechanism involved in the pathogenesis of EC and is helpful for the identification of new diagnostic and therapeutic targets for the treatment of EC.

Urogynaecology: Pelvic Organ Prolapse

A new affordable and easy-to-make pelvis model for complex urogynaecological laparoscopic procedures training

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Background

Our aim is to introduce a new affordable and easy-to-make pelvis model for complex urogynaecological laparoscopic procedures training that can be used as an additional training level between basic laparoscopic psychomotor skills training and performance of the procedure on a real patient.

Methods

We modified a commercial female pelvis model consisting of sacrum, coccyx, two hip bones, the pubic symphysis, the fifth lumbar vertebra with intervertebral disc, and certain pelvic ligaments. For modification, we used sponge foam paper, felt fabric pieces, chenille stems, foam, plastic ties, fabric glue, and a thick, coated wire. We created pelvic floor using red-coloured sponge foam paper. Next, we created a vaginal cuff using felt and the uterus using foam. A wire was inserted into the cuff or the uterus, respectively, to enable movement into anterior and posterior direction, mimicking the use of a manipulator during surgical procedure. We also made a two-dimensional model of a bladder using a yellow-coloured sponge foam paper and a model of both ureters using a chenille stem was used. For additional challenge, left common iliac vein and hypogastric nerves can be created using red felt and a white thread. In the final step of the process, we created anterior longitudinal and pectineal ligaments using felt fabric pieces of different colours.

Results

We created two different pelvis models: one with the uterus and one with the vaginal cuff. For training purposes, they can be put in a box simulator and attached to the box using a wire. They enable training of laparoscopic pectopexy and hysteropexy/sacrocolpopexy. Trainees can practice proper mesh placement and suture the mesh to the corresponding anatomical structures. Because of the wire inserted in the uterus/vaginal cuff, it is possible to move the uterus/vaginal cuff in the anterior-posterior direction, thus mimicking the use of the manipulator during surgery. The pelvic floor, pelvic bones, ligaments, bladder and the ureters give a good resemblance to real-life pelvic anatomy and give trainees the opportunity to work and suture in a limited space, just as they would in real surgical procedure. Except for the basic pelvis, all components of the model are reusable, inexpensive and can be simply replaced when necessary. While basic pelvis model was bought from the manufacturer for approximately 210 EUR, all of the other components were bought in specialized art supplies store for less than 15 EUR per model. In this manner, the model can be simply renewed and used for a long period of time with relatively low costs.

Conclusions

We believe that our pelvis model could provide a valuable tool for complex urogynaecological laparoscopic procedures training and help to reduce the long learning curve of these procedures.

Urogynaecology: Pelvic Organ Prolapse

Laparoscopic sacrocolpopexy long term quality of life and outcome: 19 years' experience in Spain

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Background

Pelvic organ prolapse is a very common problem in women. 30-50% of women have a lifetime risk of being affected. There is also a very high risk of recurrence even after surgical correction. This high rate mandated a better understanding of prolapse and emphasized the importance of more robust approaches. The aim of our study is to assess the long-term quality of life after laparoscopic sacrocolpopexy, evaluate the outcomes in relation to patient demographics, degree of prolapse and preoperative quality of life, and analyze the enhancing factors.

Methods

We included All the women who underwent laparoscopic sacrocolpopexy between 1999 and 2018 across the 2 centers where the study is held. We did a retrospective analysis (Canadian Task Force classification II-1). We collected Demographic, clinical, preoperative, operative and postoperative details through patients' medical records. Quality of life outcomes were assessed with 2 quality of life questionnaires: The Pelvic Floor Distress Inventory-20 (PFDI-20) and the Pelvic Floor Impact Questionnaire-7 (PFIQ-7). We made a descriptive analysis for the surgical complications and outcomes, and a detailed statistical analysis for the quality of life, with a mean \pm standard deviation for continuous variables and 95% confidence interval for all the categorical variables.

Results

The mean age of patients in our study was 56.76 years with a mean follow-up duration of 8.8 years. The mean operating time was 166.98 minutes. The rate of complications was less than 2%. We did not report any serious complications (Clavien-Dindo grade III or above). Follow-up was performed using a telephone questionnaire. 62.5% of the patients responded to the questionnaire. There was substantial improvement in quality of life, bladder and bowel symptoms as per the majority. Of the patients who responded 82% stated that they were satisfied / very satisfied with the results, 6% were little / moderately satisfied and 12% were not satisfied.

Conclusions

Our results confirm that laparoscopic sacrocolpopexy is an effective and safe option for the treatment of pelvic organ prolapse at long periods of follow up, and also highlight the importance of robust analysis of postoperative quality of life in those patients as in many occasions it is unrelated to the degree of anatomical correction or prolapse recurrence.

Urogynaecology: Pelvic Organ Prolapse

Simplified laparoscopic sacropexy: can we avoid deep vaginal dissection?

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Background

Even if laparoscopic sacropexy offers improved long-term recurrence rates, it does involve surgical intraoperative morbidity and long operating times; to date there is no universally accredited and accepted technique for the preparation of the vagina or graft attachment. We evaluated the safety and efficacy of our “simplified” laparoscopic sacropexy, that provides the anchoring of meshes solely to the vaginal apex, even in the presence of advanced multi-compartment vaginal prolapse.

Methods

Patients with stage ≥ 2 apical prolapse who underwent a “simplified” laparoscopic sacropexy from October 2010 to May 2017 were retrospectively extrapolated from our department database and analyzed. Data on prolapse stage and urogenital functions were collected prospectively through clinical exam and questionnaires at baseline, 6 months and every post-surgical year.

Results

121 patients were eligible for the analysis, at an average follow-up of 33.2 months. Average operative time was 135.1 minutes; there were no intraoperative visceral or vascular injuries. There was 1 recurrence (0.8%) and 2 vaginal erosions (1.6%). The urogenital symptom scores improved significantly as did those on the patients' quality of life.

Conclusions

Our results indicate that an adequate re-suspension of only the apex suffices to correct also the other compartments, even in patients with a preoperative multi-compartment prolapse stage of >2 . “Simplified” laparoscopic sacropexy is as efficacious as the “reconstructive” approach (that provides for deep vaginal dissection and mesh anchoring) with comparable long-term anatomic and functional outcomes. Moreover, it was also associated with shorter operative times and no major intraoperative complications due to deep vaginal dissection up to puborectal muscles and bladder trigone.

Miscellaneous | Niche

The clinical success rates of radical hysteroscopic niche excision

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Background

Cesarean scar niche is often associated with abnormal post menstrual bleeding, infertility and pain. Hysteroscopic excision of cesarean niche was described in the past, mainly as local ablation of edge resection. In this study we aimed to evaluate the efficacy of radical hysteroscopic cesarean scar niche repair in symptomatic patients.

Methods

Cesarean niche was first diagnosed using a transvaginal ultrasound transducer. A hypoechoic area within the myometrium was identified at the lower segment and residual myometrial thickness was measured. An office hysteroscopy was then performed to confirm the diagnosis and evaluate the area. Symptomatic patients with myometrial thickness >3mm were considered for hysteroscopic cesarean niche resection. Using a cutting loop and pure cutting current, the edges of the defect were resected. This was followed by resection of scar tissue at the apex of the niche, until underlying muscular tissue was evident. Clinical and surgical data were retrospectively collected and analyzed. Patients were contacted after a minimum of 1 year following the hysteroscopic repair to evaluate outcomes in terms of abnormal uterine bleeding (AUB), recurrence of symptoms and general satisfaction

Results

Between 2011 and 2015, a total of 80 patients underwent hysteroscopic niche repair. Fifty-seven agreed to participate, 4 declined participation and 19 were not available. Patient's mean age at procedure was 37.52±5.3. Median and IQR of gravidity, parity and previous caesarean sections were 6 (4-8), 5 (4-6) and 3 (2-4) respectively. All included patients suffered from abnormal uterine bleeding, 25 of them also experienced infertility (36.8%), none reported on accompanied pelvic pain. Following hysteroscopic niche repair, patients reported a statistically significant reduction in number of bleeding days per cycle (15.7±4.8 vs. 10.3±, P<0.001). Forty patients noted improvement in AUB, 16 experienced no change whereas one patient reported increased bleeding. Reduction in AUB occurred immediately following repair in 16 patients, within 3 menstrual cycles in 13 patients and after more than 3 cycles in 11 patients. Of the 25 who suffered from infertility, 21 attempted to conceive spontaneously following niche repair. Of those, 10 (47.6%) patients conceived at least once and 9 delivered at least once

Conclusions

Radical hysteroscopic surgical repair of cesarean scar niche is an effective treatment option for symptomatic patients suffering from irregular menstrual bleeding and secondary infertility.

Miscellaneous | Niche

Pregnancy in scar – maximal treatment with minimal intervention

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Background

Pregnancy implanting in a cesarean section scar is a rare ominous type of ectopic pregnancy. Early detection and termination of cesarean scar pregnancy (CSP) are crucial in order to avoid complications. We aimed to investigate our experience in detection and treatment of CSP

Methods

A retrospective study in a tertiary center between the years 2015-2017. Data were collected from patient's medical record.

Results

Ten women were detected with CSP. All patients presented with spontaneous, singleton pregnancy. 90% were in their first trimester (GA 5^{5/7}-12^{0/7}), with a history of at least 1 previous cesarean section (60%), and up to 3 cesarean sections (40%). 4 patients presented with vaginal bleeding. Three patients (30%) presented with viable CSP. Treatment modalities included ultrasound guided aspiration (70%), laparotomy (10%), surgical hysteroscopy (10%). Methotrexate (MTX) was given primarily to all the patients with viable CSP.

Conclusions

CSP treated safely with minor procedure of ultrasound guided aspiration without any further complications. MTX should be given primarily in case of Viable CSP pregnancy

The minimally invasive approach to surgical correction of uterine scar incompetence after caesarean section

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Background

At present time there is a stable tendency to increase in frequency of Cesarean section that's why evaluation of the uterine scar condition is actual. Aim of study: to evaluate the different methods of incompetent scar repair in context of reproductive function restoration.

Methods

66 patients with the uterine scar incompetence were enrolled in the study. Patients were divided in 4 groups: 1st – diagnostic hysteroscopy and laparoscopy (11), 2nd – hysteroscopy, Laparoscopic repair of incompetence scar (16), 3 - hysteroscopy, Laparoscopic excision of incompetence scar margins and repair of uterine wall (32), 4 - diagnostic laparoscopy and hysteroscopic resection or coagulation on niche margins (7).

Results

Mean age of patients was 21,4±4,9 years. 89,4% patients had history of urgent cesarean section (acute hypoxia, secondary weakness of labor, clinically narrow pelvis). The thickness of the scar by ultrasound and MRI to 4 mm, the presence of niches was in all cases. 38 patients had menorrhagia, metrorrhagia, pain, dyspareunia, infertility. Mean operative time was 41±13; 108±34; 130±32; 53±13; min, respectively. Intraoperative blood loss was extremely low (50 ml). No complications were observed. One patient of the 3 group had reoperation. After operation all patients of 2 and 3 groups had thickness of the scar up to 6 mm. At present time 12 patients are delivery, 6 - pregnant.

Conclusions

Laparoscopic repair of incompetence scar is minimally invasive and effective treatment. But this issue requires further study: development of criteria for the evaluation of the scar incompetence using by ultrasound and MRI, indications for incompetence scar repair, the choice of surgical treatment method, evaluation of results.

Laparoscopy: Mullerian Anomalies

Laparoscopic gonadectomy in Complete Androgen Insensitivity Syndrome

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Background

Complete Androgen Insensitivity Syndrome (CAIS) is an intersex type of male pseudo hermaphroditism presenting with primary amenorrhoea, female phenotype and male genotype. A case report of CAIS is presented and managed in a tertiary hospital with laparoscopic gonadectomy and right inguinal canal exploration with gonadectomy and herniorrhaphy.

Methods

MRI of the pelvis and ultrasound of both inguinal regions were taken. Karyotyping and hormonal analysis were performed to confirm the diagnosis of CAIS. After a year of psychological counselling and evaluating risks and benefits of CAIS, consent was given for laparoscopic gonadectomy and right inguinal canal exploration with gonadectomy and herniorrhaphy.

Results

MRI revealed complete absence of cervix and uterus with an abnormally truncated vagina ending in a blind pouch. An ectopic right ovary 2.4x1.5 cm in the right inguinal area and a normal looking ovary 2.4x1.6 cm in the left pelvic cavity were considered. Ultrasound of inguinal areas showed 3.1x3.2x1.4 cm small testicle above the right inguinal region. Chromosome analysis had a male karyotype with XY sex chromosome. Hormonal analysis showed estradiol 42.63 pg/ml, FSH 25.23 mIU/ml, testosterone 6.830 ng/ml (↑), LH 65.04 mIU/ml (was elevated as compared to an adult male). At laparoscopy, the left gonad was intraabdominal over left external iliac vessels below the internal inguinal ring. It was dissected and clamped using hem-o-lok ligating clips. The right inguinal area was explored with gonadectomy and herniorrhaphy. Histopathologic examination showed both testes with multifocal hyperplasia of Sertoli-Leydig cells. Postoperative course was uneventful. Hormone replacement therapy was recommended.

Conclusions

CAIS can be diagnosed clinically by physical examination, imaging techniques, hormonal assay and karyotyping. Laparoscopy helps confirm the diagnosis.

<https://player.vimeo.com/video/269439606?autoplay=1>

Laparoscopy: Mullerian Anomalies

Should Patients with tubo-ovarian abscesses have standardised or individualised treatment? Review of a short case series

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Background

Tube-Ovarian Abscess (TOA) is defined as a collection of pus involving one or both tubes and/or the ovaries, often resulting from Pelvic Inflammatory Disease (PID), a bowel related disease or pyelonephritis. It is 10 times more likely in women with endometriosis. TOA can progress to severe sepsis, with high morbidity and impact on fertility.

Methods

13 cases of TOA were identified from medical records and analysed retrospectively. Presentation, imaging, in-patient management and follow up were noted.

Results

The average age of patient was 42.6 years, consistent with current trends. 10 out of 13 cases presented with abdominal pain. Inflammatory markers were normal/mildly elevated in the majority of cases. Multiple imaging modalities were used both on admission and during follow up.

Trans-vaginal ultrasound was the initial investigation choice in 7 cases and only 3 of these suggested TOA. 10 cases had CT/MRI imaging with only 3 of these suggesting a TOA. A further 4 CT/MRI scans suggested several differential diagnoses, which included TOA. In two cases TOA was not suspected at imaging and were first diagnosed at either emergency or elective surgery.

The management options chosen were antimicrobial treatment alone, antimicrobial treatment and emergency surgery, or antimicrobial treatment and deferred surgery. Three patients presented with acute sepsis. One case was treated exclusively with antibiotics and the other two with a combination of antibiotics and emergency surgery. All improved and resolved at 6 months.

5 patients had antibiotic management alone with one complete resolution at 6 months. The remaining 8 cases have undergone or been recommended surgery. Two required emergency surgery. 3 underwent elective surgery and two of these were expedited as they clinically deteriorated and both suffered complications. One had a bowel injury and the other patient had severe Crohn's disease and underwent emergency laparotomy. Two cases are awaiting elective surgery due to continued pain and increasing size of pelvic mass. One patient whose abscess has also increased in size has declined surgery in favour of watchful waiting.

Conclusions

In our case series the clinical presentation ranged from incidental finding to acute sepsis and we resorted to numerous modalities of imaging. Multidisciplinary discussion often decided on conservative management. Whether surgical intervention is undertaken as an emergency or electively, consideration should be given to early involvement of other specialists such as colorectal surgeons, more so in cases with chronic co-morbidities such as endometriosis or Crohn's disease. There are no set guidelines for managing TOA and though individualised treatment is central to the management of TOA, a defined set of criteria for early identification of TOA is an immediate priority.

Laparoscopy: Mullerian Anomalies

Diagnosis and laparoscopic management of hematometra in patient with hemi uterus and rudimentary uterine horn

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Background

We describe a case of a 18 years old nulliparous woman who was admitted to our gynaecological emergency room due to dysmenorrhea with uterine congenital anomaly.

Methods

At ultrasound retroverted uterus with tubular shape and regular dimensions was found. A rudimentary uterine horn of 4 cm was evident with a cavity spread by hypoechoic material referable to blood. No cervical or vaginal anomalies were found at clinical evaluation. According to the ESHRE/ESGE classification of female genital tract congenital anomalies, our patient belonged to U4aC0V0 class. Magnetic resonance confirmed ultrasound findings, showing a left hemi uterus near a right rudimentary uterine horn. The rudimentary uterine horn was occupied by hyperintense material in the T1-weighted images becoming hypointense in T2-weighted images, suggesting the presence of blood. A laparoscopy was performed in order to remove the rudimentary uterine horn.

Results

After mobilization of the right rudimentary uterine horn, we proceeded with an excision using new generation surgical device. In-Bag manual morcellation of the rudimentary uterine horn was performed and histological examination confirmed the presence of muscular tissue with foci of adenomyosis and endometrium. The patient was discharged after two days with good health condition. After 3 months the patient reported no pain and regular menses.

Conclusions

An accurate preoperative assessment for evaluating women with congenital anomalies of genital tract is essential to determine therapeutic strategies. Laparoscopic surgery with minimally invasive approach could be an essential tool to treat this kind of cases, achieving optimal results with low post surgical pain and hospital stay.

<https://player.vimeo.com/video/269868629?autoplay=1>

Oncology

Hysteroscopic endometrial focal resection followed by levonorgestrel intrauterine device insertion as a fertility-sparing treatment of atypical endometrial hyperplasia and early endometrial cancer: a retrospective study

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Background

Women with endometrial adenocarcinoma or atypical endometrial hyperplasia (AEH) should undergo a total hysterectomy with bilateral salpingo-oophorectomy. In young women, the majority of cases are endometrioid type, focal, well differentiated, early endometrial cancer (EEC), limited to endometrium or superficial myometrium (stage FIGO IA, International Federation of Gynecology and Obstetrics). Consequently, the five years disease-free survival rate of up to 99.2% in young women is higher than the 86% observed in women older than 45. The conservative management of early endometrial cancer (EEC) and AEH is generally accepted in young women who desire to preserve their fertility or in women having serious surgical risk factors. This approach is usually based on progestins alone, with levonorgestrel-releasing intrauterine device (LNG-IUD) considered as the first-line treatment. The aim of our study was to assess the safety and effectiveness of the association of hysteroscopic resection with LNG-IUD for stage FIGO IA, focal, well differentiated EEC and AEH in young women to preserve their fertility.

Methods

The study protocol was designed a priori. Sixty-nine consecutive patients from 2007 to 2017 with a diagnosis of EEC (n=14) and AEH (n=55) satisfying the selection criteria were included in a retrospective study. Patients with EEC were treated by hysteroscopic resection of the lesion in three steps, while patients with AEH were treated by superficial endometrial resection preserving the basal layer of the endometrium. The LNG-IUD was inserted in all patients. All the patients were followed up for 24 months with hysteroscopic biopsies.

Results

At 6 months of follow-up, 11/14 (78.6%) patients with EEC and 51/55 (92.7%) with AEH achieved a complete response. At 12 months of follow-up, 1 (7.1%) patient with EEC and 3 (5.5%) with AEH achieved a partial response. One (7.1%) patient with EEC had progression of the disease at 3 months of follow-up. Two patients with EEC (18.2%) and 2 patients with AEH (3.9%) had a relapse during the follow-up at 12 and 24 months respectively. Among 25 patients who had removed LNG-IUD, 10 (40%) gave birth after natural conception in the last twelve months of follow-up.

Conclusions

The combined treatment with hysteroscopic resection and LNG-IUD could be considered an efficient and safe approach in the management of EEC and AEH in young women to preserve fertility, since it showed similar response and live birth rates, but considerably lower relapse rate when compared with progestins alone.

Oncology

The prognostic value of exosomal aHIF and establishment of a nomogram for predicting survival in epithelial ovarian cancer

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Background

Long noncoding RNA antisense hypoxia inducible factor (aHIF) plays important roles in various cancers. Exosome is key mediator of cellular communication by transporting molecule and has been regarded as promising non-invasive biomarkers. This study is aim to evaluate the expression profile of exosomal aHIF and investigate the clinical significance of exosomal aHIF in epithelial ovarian cancer (EOC).

Methods

Sixty-two patients with EOC in Obstetrics and Gynecology Hospital of Fudan University and twenty healthy women were included in this study. Serum exosomal aHIF were detected by ExoQuick™ Kit and subsequent RT-qPCR.

Results

The expression level of serum exosomal aHIF in EOC patients was significantly higher than that of healthy women ($P < 0.05$), and was correlated to the FIGO stage and histological grade of the EOC patients ($P < 0.01$). Kaplan-Meier survival analysis demonstrated that the EOC patients with higher expression of exosomal aHIF is associated with poorer overall survival ($P < 0.01$). Cox multivariate regression model revealed that FIGO stage, residual tumor size, and exosomal aHIF level were independent prognostic factors of EOC ($P < 0.05$). Additionally, we established a nomogram model which showed a good prediction of the probability of 1-, 3-year overall survival of EOC patients according to the c-index and calibration curve.

Conclusions

Exosomal aHIF is overexpressed in EOC and can serve as a biomarker for unfavorable prognosis and as a therapeutic target in EOC. Our study shed a light on utilizing serum exosomal lncRNA as a promising non-invasive tumor biomarker for diagnosis and prognosis of EOC.

Oncology

Laparoscopic free omentoplasty following pelvic lymphadenectomy can prevent protein loss: a case-control study

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Background

A consecutive series of 80 patients were included in this study. The eligibility criteria were cervical cancer with FIGO stage IA2 to IIA1. Major exclusion criteria were ovarian malignancies, previous radio- or chemotherapy, coagulation disorders, previous thromboembolic disease and lymphocysts or lymphedema. The following parameters were registered at baseline: age, weight, height and body mass index (BMI). For all patients, preoperative investigations including pelvic magnetic resonance or pelvic computerized tomography were performed to assess local disease extent and lymph node states.

Methods

All the patients underwent systematic laparoscopic pelvic lymphadenectomy and radical hysterectomy. In the treatment group, free omentoplasty was performed during operation. The omentum was dissected and cut in half. Then the free omentum was sutured to the peritoneum around the foramen obturatum by no absorbed stitches. A drainage tube was placed at the end of the surgery. Prophylactic antibiotics were administered intraoperatively.

Results

A total of 80 patients were enrolled in this study, among which 40 patients underwent radical hysterectomy and lymphadenectomy with free omentoplasty in the treatment group. The rest 40 patients underwent surgery without free omentoplasty (control group). The operation time of the treatment group was significantly longer than the control group due to the free omentoplasty (168.2 ± 24.2 vs 125.5 ± 33.3 , $p=0.002$). Duration of peritoneal drainages were shorter in the treatment group than the control group (3.5 ± 1.7 vs 10.3 ± 4.2 , $p<0.001$). And the degree of albumin decline in the treatment group was significantly lower than that in the control group (3.2 ± 1.1 vs 6.7 ± 2.5 , $p=0.003$). The incidence of pelvic lymphocele postoperatively also reduced in the treatment group (15% vs 32.5, $p<0.001$).

Conclusions

Simultaneously free omentoplasty during laparoscopic pelvic lymphadenectomy and radical hysterectomy could prevent protein loss and lymphocysts. It also decreased the duration of peritoneal drainages post-operation.

Oncology

Endometrial intestinal metaplasia

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Background

Metaplasia is understood as the transformation of an adult tissue by a different tissue, usually from the same blastodermal leaf. Apparently its origin is in the reprogramming of the stem cells located in the epithelia (reserve cells) or undifferentiated mesenchymal cells of the connective tissue, before a chronic irritation of the tissue (physical, chemical, inflammatory agents, hormones, etc.) .

An endometrial level, since these are types of metaplasia of which the intestinal type is extremely rare. Some authors describe endometrial intestinal metaplasia as a rare expression of complete intestinal differentiation of the mucinous type. It is characterized by glands coated with columnar cells with brush border, goblet cells and sometimes variable number of neuroendocrine cells.

Intestinal metaplasia is more common at the level of the cervix, where association with in situ or invasive adenocarcinoma is possible. This fact makes the management of the endometrial location should rule out the existence of endocervical neoplasia.

We present a case of endometrial intestinal metaplasia in a 44-year-old patient with a history of menstrual abnormalities and abnormal menstrual bleeding at 37 years of age. In the study, including endometrial-endocervical histology, no organic pathology is found. Intrauterine device levonorgestrel-releasing (IUD) was inserted at 37 years of age (five-year change), with good tolerance and response to the symptoms of menstrual cycle disorders. In control at age 44, the patient exhibits increased secretion of mucus at the vaginal level and nonspecific abdominal discomfort, without fever or abnormal vaginal discharge. In the ultrasound evaluation intrauterine liquid collection is appreciated, with IUD inside in situ. After aspiration and study of the liquid series, a negative cytology was diagnosed for malignancy, positive microbiology for streptococcus agalactiae and endometrial biopsy compatible with endometrial intestinal metaplasia.

Methods

Endometrial intestinal metaplasia

Results

Endometrial intestinal metaplasia

Conclusions

Endometrial intestinal metaplasia

Miscellaneous | Heavy Menstrual Bleeding

Clinical evaluation of the Librata endometrial ablation device in an outpatient setting

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Background

The objective of this evaluation was to assess the acceptability and effectiveness of the endometrial ablation device LiNA Librata in an outpatient setting.

Methods

Prospective evaluation of 53 patients with Librata endometrial ablation. All patients suffered from menorrhagia for benign reasons and were unresponsive to medical therapy. 46 patients were treated in an outpatient setting and 7 procedures were performed under general anaesthesia in the day surgical unit. Prior to the procedure hysteroscopy and endometrial biopsy were performed. Patients with caesarean sections were assessed with ultrasound to ensure the myometrial thickness at the scar was no less than 10mm. Endometrial thinning was not performed. In the outpatient setting a pre-procedure regime of diclofenac 100mg, co-codamol 30/500x2 and diazepam 5mg was given 30 minutes preoperatively. A cervical block with 30mls chirocaine (5mg/ml) was performed 10 minutes prior to the ablation. Inhalational nitrous oxide was available during the procedure with tramadol and buscopan as rescue analgesia post operatively. Pain scores were obtained immediately after the procedure using a 10-point visual analogue scale. The patients were followed up for 6 - 9 months post-ablation.

Results

The median age of the study group was 45 (range 30-53), the median BMI was 27 (range 17-42) and the median number of parity was 2 (range 0-5) with lower segment caesarean sections in 26% of the patients (14/53). The median uterine sound length was 8 cm (range 5-14 cm) and 15 patients (28%) had uterine fibroids sized < 3 cm. 49/53 procedures were completed, in 4 cases the procedure was automatically aborted due to excess pressure noted by the device. Follow up data are available for 52 patients. 87% reported reduced menstrual blood loss (45/52) including 33% with amenorrhoea (n=17/52). 81% were satisfied with the procedure (42/52). 19% required further treatment (10/52) including 5 patients with hysterectomy (two patients with adenomyosis). All patients in the outpatient group appeared to tolerate the procedure with none being abandoned due to discomfort. Cervical dilatation was conducted in 23 patients (43%). The mean (SD) pain score was 5,4 (2,2) and 13 patients (25%) received rescue medication. There were no adverse patient consequences due to the procedures.

Conclusions

The Librata endometrial ablation device is an effective treatment for abnormal uterine bleeding and well tolerated in an outpatient setting.

Miscellaneous | Heavy Menstrual Bleeding

Rate of hysterectomy following 419 Novasure procedures - real-life experience of a teaching hospital in the UK

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Background

Novasure endometrial ablation has been playing an important role in the management of heavy menstrual bleeding for the past decade. The aim of this observational study was to assess the rate of further interventions following this procedure in every day practice outside the clinical trials setting.

Methods

Electronic patient records were accessed for 419 women undergoing Novasure ablation at Sandwell and West Birmingham NHS trust from 1st May 2011 to 31st December 2016. The follow-up period ranged from 15-82 months.

Results

The median age of the included women was 45 years (range: 25-55 years). The number of the procedures performed as inpatient under general anesthetics *versus* outpatient procedures using local anesthetics and gas and air was 173 *v* 246, respectively. Within the first month, 6 (1.4%) women presented with endometritis and were treated with antibiotics. Eighty-two (19.6%) women were referred with persistent or recurrent abnormal menstruation or dysmenorrhoea. Of these women, 44 (10.5%) were managed either conservatively or medically, and 38 (9%) underwent hysterectomy. The median interval from Novasure ablation to hysterectomy was 12 months (3- 65 months). There was no statistically significant difference in the rate of hysterectomy between inpatient and outpatient Novasure ablation (16 *v* 22, $p=0.1$).

Conclusions

The rate of hysterectomy for failure of Novasure endometrial ablation was only 9%. Our real-life data highlights the efficacy of the procedure in managing heavy menstrual bleeding and demonstrates that there is no difference in the outcome between inpatient and outpatient procedures.

Miscellaneous | Heavy Menstrual Bleeding

Treat-mi Pilot: Treatment of irregular bleeding after insertion of the levonorgestrel-releasing Intrauterine system (LNG-IUS)

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Background

The levonorgestrel-releasing Intrauterine system (LNG-IUS) releases levonorgestrel for five years. Irregular bleeding may occur up to six months after insertion of the LNG-IUS. In some cases, irregular bleeding may continue after six months or return over time. Up to 60% of women remove the LNG-IUS prematurely. One reason for premature removal is the presence of bleeding disturbances. The best treatment option for these bleeding disturbances is unknown.

Objectives

To evaluate the effect of estradiol on irregular bleeding, at least 6 months after LNG-IUS insertion. Secondary objectives include evaluation of premature removal of the LNG-IUS and the occurrence of adverse events with use of estradiol.

Methods

This is a prospective cohort pilot study. Nineteen women with an LNG-IUS in situ for more than six months were included. Exclusion criteria were the presence of polyps, myoms or malignancies. The included women received 2mg estradiol daily for six weeks. The follow up consisted of questionnaires completed at baseline, after six weeks and after three months.

Results

The number of days with irregular bleeding was significantly lower after the use of estradiol. The baseline average of 21 (16.0-30.0) irregular bleeding days per month decreased to an average of 5 (3.0-11.0) irregular bleeding days per month ($p=0.003$). Three women had their LNG-IUS removed at three months follow up because of persistent irregular bleeding. No adverse effects were reported. Side-effects were reported by 68,4% of women. Most reported side-effects included painful swollen breasts, mood swings, weight gain and vaginal complaints.

Conclusions

Use of estradiol leads to a significant decrease in the number of irregular bleedings days within a short term of 3 months. In the future a placebo-controlled trial with a longer follow up is needed to evaluate estradiol as a treatment option for irregular bleeding.

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Pregnancy and tubal patency rates after tubal implantation surgery: a cross-sectional study

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Background

Blockage of the fallopian tubes typically prevents successful passage of the sperm or the fertilized egg to the uterus, leading to infertility consequently. We started this study to evaluate the feasibility and results in terms of pregnancy and patency rates after tubal implantation surgery for infertile women since 2011.

Methods

In a retrospective single-center survey, thirteen cases of infertile women were included in this study. After laparoscopic tubal implantation, 13 infertile patients were analyzed: 8 cases had either bilateral tubal occlusion or only one left fallopian tube blocked (Group 1), while other five cases in Group 2 had cornual pregnancy with one grossly normal fallopian tube. We evaluated the pregnancy and tubal patency rates between these two groups.

Results

Eleven of 13 patients had confirmed patent tubes by hysterosalpingogram (HSG), giving a tubal patency rate of 69.2% (9/13) and the pregnancy rate of 46.2% (6/13). The six pregnant cases included two from Group 1 with a pregnancy rate of 25% (2/8) and 4 from Group 2 patients with a pregnancy rate of 80% (4/5). Live birth rate was 38.5% (5/13) among all the patients with a case of abortion.

Conclusions

This is the first study of tubal implantation surgery in Taiwan. We achieved an overall patency rate of 69.2% with good gynecologic outcomes in the past years. Laparoscopic tubal implantation could be a useful tool for infertile women who suffered from blockage of the fallopian tubes.

ISRS-FT International Society for Reproductive Surgery

Surgical and clinical outcomes of tubal reanastomosis

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Background

Robotic tubal reanastomosis is an effective surgical method for secondary infertile patients who had a history of tubal ligation and have desire for more children without the aid of assisted reproductive technique. In this study we aim to compare the pregnancy outcomes among the patients who underwent robotic tubal re-anastomosis procedure in our clinic. One group consists of patients who underwent bilateral robotic re-anastomosis whereas the other group includes the patients who underwent unilateral robotic re-anastomosis due to anatomical and surgical limitations.

Methods

Between January 2009 and January 2018; 98 patients underwent robotic tubal re-anastomosis by using Da Vinci Xi-Si surgical system. Patients' demographic data including operative time, results of the operation as if it could be done unilaterally or bilaterally, chromopertubation results, and pregnancy rates, subsequent live births, ectopic pregnancies, miscarriages, and hospital stays were recorded. Pregnancy outcomes were collected via outpatient clinic meetings, on the phone and through the hospital's data recording system.

Results

Mean age and body mass index for the patients were 36.6 (28–46) years and 27.5 (20.3–39.4) kg/m², respectively. The operation time ranged from 30-130 minutes with a mean time of 87 minutes. The mean hospital stay was 1.8 days. There were no significant intra-operative or early-postoperative complications. All surgeries were completed robotically with no conversion to laparotomy. Between 98 patients who underwent robotic tubal reversal procedure, the pregnancy outcome results of 76 patients were obtained. Among all cases 63% of the were done bilaterally and 37% could be done unilaterally. The pregnancy rate in bilateral and unilateral groups were 65% and 54% respectively. The take-home baby rate in the bilateral group and unilateral group was 42% and 36% respectively. In bilateral tubal reversal group the pregnancy rate was 65%, take-home baby rate was 42%, miscarriage rate was 27% and ectopic pregnancy rate is 11% whereas in unilateral tubal reversal group the pregnancy rate is 54%, take-home baby rate was 36%, miscarriage rate was 18% and no ectopic pregnancy confirmed.

Conclusions

Robotic surgery in gynecology is being widely used following the adaptations of the developments in robotic technology. IVF is expensive and time-consuming, and carries the risk of multiple gestation and drug side effects. Considering the cost of IVF, a better choice may be tubal re-anastomosis. Therefore robotic tubal re-anastomosis is a competent alternative to assisted reproductive techniques, which enable couples to conceive spontaneously without monthly follow-ups or additional drugs.

Laparoscopic myomectomy: influence on endometrial receptivity, conception and implantation rate in IVF program

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Background

To assess post-operative fertility rates and pregnancy outcomes of patients who had Laparoscopic myomectomy (LM) and estimate the level of endometrial receptivity markers (pinopodia, leukemia inhibitory factor (LIF), vascular endothelial growth factor-A (VEGF-A), claudin-5 (CLDN-5)).

Methods

437 patients that underwent LM were included in the study. The endometrial receptivity and the outcomes of the IVF program were studied in 52 patients among 437 with intramural uterine myoma (UM) of 4 cm in diameter with no deformation of uterine cavity before (Group 1A) and after LM (Group 1B) before inclusion into the IVF program. 53 women with tuboperitoneal factor infertility with no myometrial pathology were a control group.

Results

Mean age was 40.55 ± 2.24 years. A mean of 3.34 ± 2.9 fibroids were removed (range 1-21), with the average mass of the fibroids being 331.23 ± 310.36 grams. 354 of 437 patients (81%) provided fertility and pregnancy outcome data. Of the 354 women, 212 (59.9%) actively tried for pregnancy after surgery. 73.2% of the 212 achieved a total of 155 pregnancies – 123 full term, 26 preterm, 16 spontaneous abortions and 2 termination. 90.4% of these patients underwent cesarean section. A subset of 104 women had pre-existing infertility and underwent IVF. After LM, 60% of these patients achieved 62 total pregnancies. Of the 354 cases, there was one placenta accreta and no uterine ruptures. Among 52 patients conception rates were 23.1% in Group 1A, 30.2% in Group 1B, and 41.5% in the control group, the decrease in the conception rate being statistically significant in the UM group as compared with the control. Implantation rates were 11.9, 16.2, and 33.9%, respectively, those being significantly higher in the control group than in the uterine myoma ($p < 0.02$) and postmyomectomy groups ($p < 0.05$). The endometrium of patients with a successful attempt of IVF showed a higher level of mature pinopodia-containing cells, higher expression of LIF and VEGF-A in the stroma and epithelial layer. The vascular endometrial epithelium was characterized by a higher level of VEGF-A and a lower concentration of CLDN-5.

Conclusions

The fertility rate after LM for women attempting to conceive (73.2%) and for those with known infertility who continued to try for pregnancy (60%) was similar. There was no incidence of major complications associated with the presence of uterine scarring in pregnancies conceived after LM. In the patients who have undergone LM prior to the IVF program, the conception and implantation rate is comparable with that in the patients without UM, which supports the need for myomectomy if intramural myomas are 4 cm or more in diameter. It is necessary to conduct investigation with the determination of a wider range of markers to evaluate the influence of myoma on reproduction.

Miscellaneous | Innovations

Single-handed laparoscopic hysterectomy with the freehand laparoscopic camera controller

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Background

After an audit demonstrated that difficulties in providing sufficient assistance were leading to cancellations of major laparoscopic surgery, the Freehand Laparoscopic Camera Controller was introduced to a teaching hospital practice. Freehand was initially used by a single surgeon for laparoscopic hysterectomy only and we present our initial experience with it.

Methods

For the first 25 cases of Laparoscopic Hysterectomy where the Freehand was used, data was collected on patient characteristics (age, BMI, previous surgeries, indication for surgery) as well as outcome measures including operative duration, blood loss and complications. Data was also collected on any difficulties in using the equipment. A group of historical controls (the preceding 25 cases) were used for purposes of comparison.

Results

There were no significant differences in outcome measures between Freehand cases and controls and in particular there was no significant prolongation of operative duration. There was an extremely low rate of conversion to laparotomy in both groups. For most cases the operation was completed with only a single assistant but in a number the operation was completed by the operating surgeon alone without any assistant. For some aspects of the surgery, the Freehand was felt to be superior to a human assistant. As experience with the Freehand device has grown, we have learned how best to position and use it and details of this will be presented.

Conclusions

The Freehand Laparoscopic Camera Controller can be useful in enabling major laparoscopic surgery to go ahead with fewer assistants and may be superior to human assistance in some ways.

Miscellaneous | Innovations

Augmented reality applied in endoscopic surgeries

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Background

Endoscopic surgery of fibroids is definitive and feasible way of therapy in symptomatic cases. Intramural fibroids located in the deep myometrium cannot be seen by naked eye, or palpated by laparoscopic, or hysteroscopic instruments. Avoiding unnecessary incisions on the uterine wall, it is important to localize precisely the fibroids pre- and intra-operatively. Augmented reality is used more and more fields of everyday life. Applying these methods can help in combining preoperative information with endoscopic video. Using MRI has been published for this function. Costs of MRI are high and availability is limited compared to ultrasonography. With a newly invented technique preoperatively ultrasonographic scanned data can be projected on the real-time video showing the exact localization of the fibroid.

Methods

During the preoperative work-up a 3D ultrasound scan is performed of the uterus. The result of this imaging system is stored in DICOM format and it contains information about the 3D volume of the uterus. The proposed method can extract and construct automatically the 3D model of the investigated uterus. Then, fibroid can be marked manually by surgeon in this model. Finally, using the manually selected (at least three) reference points for the registration of the different modalities, the proposed methods performs the necessary affine transformations on the 3D uterus model and project to the video frame. In this way, by the technique of the augmented reality, a previously scanned uterus with fibroid in the deep myometrium is projected on the video frame of a video taken during endoscopic surgery.

Results

In two cases of intramural fibroid this new technique was used. By applying augmented reality during one-one cases of laparoscopic and hysteroscopic surgery fibroid was identified. Resecting fibroid happened by one incision.

Conclusions

Using the advantages of augmented reality, finding and localizing fibroid is easier during endoscopic surgery. Ultrasonography is widely available procedure with lower costs. Preoperative ultrasonographic scan can help in fibroid identifying and localizing procedures. Performing the proper incision, without any others unnecessary ones, complication rate, blood loss and duration of operation can be significantly reduced.

Miscellaneous | Innovations

Virtual reality imaging to aid surgical planning prior to advanced gynaecological laparoscopy

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Background

Cross-sectional imaging such as MRI and CT has long been used to aid the gynaecological surgeon pre-operatively and intra-operatively. It is particularly helpful in cases where the anatomy is abnormal such as congenital malformations of the urinary and genital tract or when the anatomy is distorted by disease progression due to fibroids, endometriosis or malignancy.

The problem with the displaying of conventional cross-sectional imaging is that the surgeon is shown the structures in the anatomical position or in cross section rather than the view they will have down the laparoscope.

Methods

A 3D model for each organ was generated by segmenting CT images using open source medical imaging software. The 3D reconstructed organs were integrated into an immersive and interactive virtual reality system providing surgeons with a safe and supportive environment for pre-operative planning

Results

Example 1; a 45 year old woman with a pelvic kidney who required a total laparoscopic hysterectomy. The virtual reality reconstruction allowed the surgeon to appreciate the location of the kidney and the path of the ureter in relation to the uterus.

Example 2; a 50 year old woman with a 20 week multi-fibroid uterus causing right sided hydronephrosis. The virtual reality reconstruction allows the surgeon to plan an approach to a laparoscopic myomectomy or hysterectomy by showing the size and location of the myomas and their relation to the urinary tract.

Conclusions

This technology has the potential to not only help in pre-operative planning but during surgery itself by overlaying the images onto the surgeon's screen.

Miscellaneous | Innovations

Laparoscopic myomectomy in 10 steps

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Background

Laparoscopic myomectomy has the advantages of a minimally invasive approach. The standardization and description of the technique are the main objectives of this video. We described laparoscopic myomectomy in 10 steps, which could help to make this procedure easier and safer.

Methods

This video presents systematic approach to myomectomy clearly divided in 10 steps

Results

1- Prepare your surgery!: make selection and prehabilitation of patient, provide a good cartography of the myoma/s, plan the surgery. 2-Ergonomy and material . 3 - Preventive hemostasis: triple occlusion. 4 - Hysterotomy. 5 - Enucleation by fast dissection and traction. 6 - Bipolar hemostasis. 7 - Check for missing myoma. 8 - Suture. 9 - Extraction/morcellation. 10 - Prevent adhesions.

Conclusions

Standardization of laparoscopic myomectomy could make this procedure easier and safer to perform. Presented 10 steps help to perform each part of surgery in logical sequence making the procedure ergonomic, easier to adopt and learn. Standardization of laparoscopic techniques could help to reduce learning curve.

<https://player.vimeo.com/video/272662066?autoplay=1>

Laparoscopy | Fibroids

Efficacy of baseball running suture using barbed string for incidence of adhesion formation after laparoscopic myomectomy: A propensity score-matched study

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Background

Barbed suture improves surgical duration and blood loss during laparoscopic myomectomy; however, some adverse events concerning postoperative adhesion were reported. The aim of the study is to assess the incidence of postoperative adhesion formation by baseball running suture using barbed string in laparoscopic myomectomy.

Methods

Patients who underwent second-look laparoscopy (SLL) 6 months after laparoscopic myomectomy at our hospital between 2010 and 2014 were retrospectively analyzed. A running baseball suture with a unidirectional barbed string (0 V-Loc™) or a running suture with an absorbable thread (0 Polyzorb™) was used to close an incised serosal wound enucleated a largest myomas in laparoscopic myomectomy. Absorbable adhesion barriers were used for the wounds. Propensity score (PS) to reduce the effect of selection bias and potential confounding in this retrospective cohort study was calculated by logistic regression analysis. PS matching (1:1) was used to adjust differences in surgical findings including the diameter of the largest myoma, number of enucleated myomas, and type of adhesion barrier.

Results

After PS matching for 215 patients (28 with barbed string and 187 with absorbable thread), surgical findings and the incidence of postoperative wound adhesions were compared between two groups comprising 22 patients each. Surgical findings were similar between the groups, except total surgical duration and blood loss (medians), which were significantly shorter and lower in the barbed string group than in the absorbable thread group (70 vs. 100 minutes; $p = 0.01$, 50 vs. 100 mL; $p = 0.02$). Regarding SLL findings, no significant differences in the incidence of postoperative wound adhesions was found between the groups [barbed string, 5/22 (18.2%) vs. absorbable thread, 8/22 (36.4 %); $p = 0.31$]

Conclusions

Our results indicate that the use of barbed string for wound closure in laparoscopic myomectomy improves surgical outcomes and does not lead to forming postoperative adhesion when used with the appropriate wound closure.

Laparoscopy | Fibroids

The First UK experience of the Sonata™ System. Treating fibroids with transcervical radiofrequency ablation: the results of a case series at 6 months

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Background

Patients are increasingly seeking uterine and fertility preserving treatments for their fibroids. They are looking for minimally invasive treatments with quick recovery times. These priorities, along with those of their gynaecologists to reduce morbidity, hospital stays and the associated costs, have encouraged the development of less invasive treatments for fibroids. Uterine sparing therapies, such as uterine artery embolization and MRI guided focused ultrasound have been used, however, concerns remain regarding the effects on fertility and efficacy. Another option is radiofrequency ablation of fibroids, using heat to destroy the fibroid tissues. The Sonata™ system uses a single hand-piece which contains both an intra-uterine ultrasound and radiofrequency probe. This allows for real-time accurate mapping and treatment of fibroids with minimal impact on the surrounding myometrium. Studies, thus far, have shown statistically significant improvements in quality of life scores and reductions in fibroid volumes. Furthermore, there is developing evidence that this has the potential to be a fertility sparing treatment with normal pregnancies following treatment. We are a tertiary level unit for the treatment of fibroids and we are the first UK unit to offer treatment with this current radiofrequency ablation device.

Methods

Patients suitable for treatment were identified from the specialist tertiary level fibroid clinic. Symptom severity and quality of life scores were calculated pre-operatively and at 6 months post-operatively, using the UFS QOL questionnaire. Fibroid volumes were calculated from magnetic resonance imaging at the same time points. Adverse outcomes, the time to return to daily activities, any re-intervention and pregnancies were also recorded. Ethical approval was granted to follow patients and record their outcomes.

Results

Since October 2016, we have treated 17 patients with radiofrequency ablation, treating a total of 34 fibroids. Of these 1 underwent further treatment for their fibroids, there were no hysterectomies or serious adverse outcomes, and current mean improvement in symptom severity score is 16.97%.

Conclusions

Overall our initial results suggest transcervical radiofrequency ablation is a safe and effective treatment for uterine fibroids. As our study continues and further evidence is accumulated we will be able to better evaluate this treatment for uterine fibroids, its efficacy and its effects on fertility.

Laparoscopy | Fibroids

Use of Esmya and outcomes at Royal Stoke University Hospital, United Kingdom

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Background

Esmya [Ulipristal acetate] was first authorised in 2012 in the UK in the treatment of moderate to severe symptoms of uterine fibroids in women of reproductive age. Following reports of serious liver injury in women using Esmya, an EU-wide ongoing review of Esmya was started in December 2017. However, temporary safety measures were introduced in February 2018 to protect women's health pending final reports of the investigation.

In the UK, DOH has so far received 1 suspected adverse drug reaction report of hepatitis whilst the use of Esmya. Approximately 20,400 treatment courses of Esmya were dispensed in the UK between 1 October 2016 and 30 September 2017

Aim:

To study all the 34 cases treated by Esmya at our setup over a 12 month period (Oct 2016- Sept 2017). Esmya was utilised in treating patients diagnosed with Uterine fibroids and with symptoms including heavy periods, pelvic pain and pressure symptoms as a preoperative aim to reduce the size of fibroids prior to laparoscopic treatment.

Methods

34 consenting patients included in the retrospective study had received Esmya either as a single course or multiple courses. These reproductive age group patients ranged from 24- 53 years old. More than half of them had multiple fibroids and more than 90% of them were suffering with heavy periods. Nearly a quarter [24%] underwent laparoscopic surgery [myomectomy/hysterectomy] with minimal blood loss and none of them required an open surgery.

Results

These reproductive age group patients ranged from 24- 53 years old. More than half of them had multiple fibroids and more than 90% of them were suffering with heavy periods. Nearly a quarter [24%] underwent laparoscopic surgery [myomectomy/hysterectomy] with minimal blood loss and none of them required an open surgery. Liver function were monitored in all these patients by appropriate Liver function tests even though none of them had any symptoms or signs of liver failure. 4 among these asymptomatic patients had slightly raised transaminases and these patients underwent further repeat blood tests and they turned to out to be within normal limits.

Conclusions

None of our patients had any evidence of developing liver failure after receiving Esmya. It did reduce their heavy periods and pressure symptoms by reducing the fibroid size. It helped in treating these patients by laparoscopic surgery by reducing blood loss and reduced the unnecessary laparotomy.

We strongly believe that Esmya has a valuable role and once reintroduced might have an role in the conservative management of uterine fibroids. Limitations of our study is in being single centric and low numbers. We hope the ongoing multi-centric trial might provide more information and guidance about the future of the drug.

Laparoscopy | Hysterectomy 2

Painless daycase vaginal hysterectomy with enhanced recovery

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Background

Hysterectomy is one of the most frequent gynaecological operations performed. It can be performed through several routes. With rapidly improving technology the aim is to reduce the physical and psychological impact of elective surgery on the patient and to facilitate a more rapid recovery. There is a strong evidence that vaginal hysterectomy is superior to other routes but recently increasing tendency to use these and perform laparoscopic hysterectomy and vaginal hysterectomy is becoming a lost art. Application of enhanced recovery principles together with appropriate use of local anaesthesia and surgical technique with the use of bipolar sealing helps with early discharge and rapid return to normal activities.

Methods

We present our case series of 100 cases over a period of 3 years from 2015-2018 at Norfolk and Norwich University Hospital, UK.

All the cases were performed or supervised by one of the three consultants. The case notes of all the 100 cases was reviewed for operative time, complications, length of stay, analgesia used in postoperative period. All the patients were given a diary to fill in noting the time to return to routine activities and satisfaction with the procedure.

We ensure patients are as healthy as possible before surgery, avoid dehydration, minimise nil by mouth, encourage high carbohydrate intake pre op, avoid mechanical enemas, avoid hypothermia, minimise use of sedatives and opiates, minimise tissue damage, minimise use of catheter and vaginal pack.

Analgesia given in the form of paracetamol, ibuprofen but not PCA/epidural

The patients are all followed up the next day by telephone call and have open access to the gynaecology ward

Results

Out of the 100 cases 60 had laparoscopic salpingoophorectomy as well and 40 had only vaginal hysterectomy. The mean age of the patients is 47yr(31- 66yrs) and the average BMI was 28.75(18-43). Parity ranged from 0-5

95 had previous vaginal delivery, 4 had previous caesarean and there was 1 nulliparous lady in our case series.91% patients were discharged within 24hrs with 46% discharged within 12hrs.

The most common indication was Menorrhagia – 78/100

Size of uterus ranged from normal size to 18cm size and Weight 75gm – 830gm

Average time of operation was 98.2min

3 women were seen within 4 weeks for minor complaints like vaginal discharge, pain around umbilicus, constipation. 3 had vault haematoma, 2 bladder injuries repaired during the surgery with no sequelae.

Diary and patient survey showed high satisfaction rates and early return to routine activities.

Conclusions

By using multimodal rehabilitation model with emphasis on information, standardized general anaesthesia, reduced surgical distress, optimized pain-relief, early oral nutrition and ambulation, minimal use of indwelling catheter and vaginal packing together with the surgical expertise and technique vaginal hysterectomy for benign cases has become more acceptable and cost effective.

Laparoscopy | Hysterectomy 2

Immediate catheter removal after laparoscopic hysterectomy: a retrospective analysis

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Background

Indwelling catheters can be removed immediately or delayed after an uncomplicated hysterectomy. Timing of catheter removal has been assessed in different studies. Immediate removal after surgery seems safe and feasible after an uncomplicated hysterectomy. Therefore in 2015 immediate catheter removal was introduced in our clinic after an uncomplicated laparoscopic hysterectomy for all indications except deep invasive endometriosis. Possible advantages of immediate removal are higher comfort for the patients and decreased risk of urinary tract infection (UTI). A possible disadvantage is an increased risk of urinary retention. In literature, the incidence of urinary retention in patients who had their catheter removed immediately after an uncomplicated hysterectomy varies between 16,4-18,8%. The incidence of UTI in this group varies between 1,4-3,1%.

We performed a retrospective analysis of all patients who underwent a laparoscopic hysterectomy.

The objective of this study is primarily to evaluate the number of urinary retention and secondary the number of urinary tract infections.

Methods

We included all women who underwent a laparoscopic hysterectomy from April 2015 until December 2017. Informed consent was obtained from all patients. Medical records were analysed to identify baseline characteristics, surgical details and complications. General practitioners of all included patients were contacted to check for post-operative urinary tract infection not registered in the hospital medical file.

Results

325 patients underwent a laparoscopic hysterectomy between April 2015 and December 2017. We sent an informed consent letter to 307 patients. The response rate was 89,2%. After excluding those who have withdrawn consent or did not response we ultimately included 242 cases in our analysis.

The mean age of our study population is 50 years. 194 (80.2%) women had their catheter removed immediate after surgery. Main reason for delayed removal of the catheter was presence of deep invasive endometriosis (n=21). The incidence of urinary retention was 4,6% (95% CI 2,3-8,3%) in the patients who had their catheter removed immediate after surgery. The incidence of UTI was 11,3% (95% CI 7,4-16,3%). In the 9 cases with retention 5 (2,6%) where solved after single catheterisation. The remaining 4 (2,0%) had an indwelling catheter for 24 hours without urinary retention afterwards.

Conclusions

Risk of urinary retention is not increased by immediate catheter removal after laparoscopic hysterectomy compared to delayed catheter removal. Therefore, there is no need to leave an indwelling catheter after surgery.

Hysteroscopic Sterilisation

Essure sterilisation – Is it time to learn removal than insertion?

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Background

Tubal sterilization using Essure® (Bayer) device is a minimally invasive technique for permanent contraception that involves placement of expanding tubal micro-inserts into both fallopian tubes hysteroscopically in an outpatient setting.

High rates of patient satisfaction have been reported for the outpatient Essure® insertion procedure but recently there have been a number of controversies and concerns with women reporting on social media of various side effects and the request for removal of the inserted implants is increasing.

Objectives: To discuss results of Essure sterilisation and removal and technique at our unit in Norfolk and Norwich University hospital.

Methods

Out of 231 cases booked for Essure sterilisation over 3 years between April 2014 and April 2017, the procedure was performed in 170 cases. All the patients are carefully counselled regarding the complications and suitability. Patients with pre-existing severe pelvic pain, significant menorrhagia, previous unilateral salpingectomy, nickel allergy were excluded and counselled regarding other methods of long acting contraception or sterilisation.

Results

Successful placement of Essure inserts with correct number of coils (3-8) was possible in 165 cases. All the patients were booked for follow up either with ultrasound or hysterosalpingogram. There were no major intraoperative complications. No pregnancy was reported due to failure of the procedure. Out of the 8 cases who had nonsatisfactory ultrasound only two had uncertain occlusion on HSG and had laparoscopic salpingectomy. Removal of the implants was performed in 11 cases, 4/11 due to new onset pain, 3/11 due to patient request due to anxiety following the recent publications in the media, 2/11 due to inconclusive HSG, 1/11 due to expulsion after insertion, 1/11 due to ability to insert only one implant. 10/11 had laparoscopic salpingectomy and removal of implants. Only one had hysterectomy as per patient's choice.

Conclusions

Essure® inserts are 4 cm long and consist of an inner coil made of stainless steel and an outer coil of nitinol (a nickel/titanium alloy) and polyethylene terephthalate fibres. Though there have been increased requests for removal due to anxiety recently the request at our centre is very low due to the careful selection of cases for Essure sterilisation. Various techniques of removal have been discussed previously including, laparoscopic, hysteroscopic removal, cornuectomy and hysterectomy. In our series, application of diathermy directly over the insert was avoided. Impedance controlled bipolar diathermy devices were used in all cases to divide the mesosalpinx. The inserts were removed by transecting the tube approximated 1 cm lateral to the cornual end without the use of diathermy, after division of the mesosalpinx, thereby exposing the distal or lateral end of Essure® insert. All Essure inserts were removed intact in our case series with no reports of implant fracture or retention of fragments.

Hysteroscopic Sterilisation

Surgical removal of Essure for device-attributed symptoms improves quality of life: a before and after study

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Background

The Essure system offers an effective method for hysteroscopic sterilization. Increasing reports of complications have raised concerns about the device's safety. Thus far, the underlying mechanisms for these symptoms are unknown. Women suffering alleged complications of the Essure device often seek surgical removal. The aim was to evaluate quality of life (QoL) and postoperative outcomes in women undergoing Essure surgical removal.

Methods

This prospective study was conducted in two French academic hospitals in the period 2017-2018. Participants were indicated Essure surgical removal for alleged adverse-reactions. Surgical techniques and complications at one month were reported. QoL was assessed preoperatively and 3 months postoperatively by SF-36 questionnaires [correlated physical health score (PCS) and mental health scores (MCS)]. Evolution of symptoms were collected at 3 months, based on clinics reports and on a dedicated questionnaire edited by the ANSM (Agence Nationale pour la Sécurité du médicament et des produits de santé).

Results

Ninety-five patients were included in the study. They were 64 laparoscopic salpingectomy-cornuotomy, 23 laparoscopic hysterectomy and 8 vaginal hysterectomy. All patients had a follow-up consultation at one month. Intraoperative complication occurred in 5 cases (1 conversion from cornuotomy to laparoscopic hysterectomy, 1 skin burn, 2 bladder injuries and 1 rectum injury without perforation). Seven post-operative complications occurred (Clavien Dindo grade 1 in six cases and grade 2 in one case). Regarding QoL assessment, there were 12 patients lost follow-up at 3 months. PCS scores were significantly lower preoperatively than postoperatively [37.6 (31-44.2) vs 50.7 (44.9-59.9); $p < 0.001$]. MCS scores were significantly lower preoperatively than postoperatively [29 (23.1-35.7) vs 52.4 (43.8-62.1); $p < 0.001$]. Extra-gynecologic symptoms (i.e. asthenia, skin lesions, headache, muscular or joint pain) were more frequent before than after surgery (96.4% vs 47.6%; $p < 0.001$). Gynecologic symptoms (pelvic pain or menstrual bleeding or dyspareunia) were more frequent before than after surgery (70% vs 18%; $p < 0.001$).

Conclusions

Patients who underwent Essure surgical removal for alleged adverse reaction to the device experienced a significant QoL improvement at 3 months. The rate of surgical complications was low. These findings will help clinicians to inform their patients about expected postoperative functional status and QoL.

Hysteroscopic Sterilisation

A combined laparoscopic and hysteroscopic fertility-preserved management of uterine arteriovenous malformation: a case report

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Background

Herein is presented a fertility-preserving laparoscopic approach in the management of a uterine arteriovenous malformation (AVM) after an invalid uterine artery embolization (UAE).

Methods

The 31-year-old woman, gravida 1 para 0, with a history of spontaneous abortion followed by dilation and curettage, had intermittent massive vaginal bleeding and then diagnosed as uterine AVMs by Doppler ultrasound and digital subtraction angiography (DSA). The patient underwent 1 UAE procedure with subsequent recurrence of symptoms. CTA demonstrated recanalization of the uterine AVM. The patient wished to preserve fertility.

Results

After informed consent, the patient was underwent a combined laparoscopic and hysteroscopic procedure with general anesthesia. During the procedure, laparoscopic ligation of left iliac artery, bipolar coagulation of the AVM and left parametrial vessels ablation were performed followed with hysteroscopic resection of a part of the AVM.

Conclusions

Laparoscopic angiocoagulation and hysteroscopic resection of a uterine AVM may offer a fertility-preserving alternative to hysterectomy in patients in whom endovascular management has failed.

<https://player.vimeo.com/video/272866003?autoplay=1>

Hysteroscopic Sterilisation

Comparison of laparoscopic techniques for surgical management of ectopic pregnancy at the University Hospital of Wales, 2016 -2017

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Background

Laparoscopy has long been gold standard for surgical management of ectopic pregnancy with various surgical techniques and equipment available. However there is variance in cost and no standardised approach.

Methods

Retrospective analysis of 47 case notes of surgical management of ectopic pregnancy at the University Hospital of Wales between 2016-2017 was performed.

Results

Mean patient age was 30years with mean patient weight of 70kg. 100% underwent salpingectomy, 45% as CEPOD category 1 emergencies.

Method of entry varied between Hasson (43%) and direct optical entry (57%). Most common methods of salpingectomy included Ligasure (60%), Endoloop (19%) and monopolar hook diathermy (11%). The most frequent combination was optical entry with Ligasure salpingectomy (47%).

When performing cost analysis the most prudent approach was Hasson entry with monopolar hook salpingectomy due to reusable equipment avoiding additional costs. The most expensive equipment combination was optical entry with Ligasure salpingectomy, adding £446 to overall operating costs.

Shortest operating time was Hasson entry with Ligasure salpingectomy (50mins) and the least mean estimated blood loss with optical entry and Endoloop salpingectomy (175mls). Longest average operating time was optical entry with monopolar hook salpingectomy (90mins). Mean operating time ranged from 64–69 minutes across all operator experience (ST3-consultant).

The monopolar hook outperformed Ligasure on equipment cost savings, however Ligasure reduced operating time. Reduced theatre time with Ligasure may in the long run outweigh the savings of utilising cheaper reusable equipment and the subsequent costs of a longer operation.

Conclusions

In conclusion if a standardised approach of reusable instruments was adopted, costs would be reduced. Although advanced bipolar devices reduce operating time, if proficiency with reusable monopolar or bipolar was commonplace, operators could become more skilful with this equipment, reducing both operating time and limiting costs.

Hysteroscopic Sterilisation

Laparoscopic preconceptional niche resection after cesarean section

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Background

Rate of Caesarean sections in Russian Federation increased every year on 1 % . In In our clinic rate of CS is 24,5%. From 2010 we perform 87 laparoscopyc repair of incompetent uterine scar (niche) after C\S

Methods

At last 5 years 57 patients we operated by laparotomy and 87 patients with scar incompetence after cesarean section was treated in our clinic by laparoscopy. Indication for surgical treatment were scar inconsistency and puerperal endometritis complicated by abnormal uterine scar healing. 8 patients were undergoing surgery at first 40 days after childbirth. 129 women were treated before next pregnancy after 24-48 months. In all cases we did Bettocchi hysteroscopy with concomitant ultrasound investigation with measurement of blood flow and scar condition. Indication for surgical treatment was residual myometrium thickness less than 3 mm

Results

Lower segment reconstruction was done in 58 patients by laparotomy (8 at 9-40 days). 50 times after conservative treatment surgery was done laparotomic access, 87 by laparoscopyc aproach. Estimated myometrial thickness after surgery was 7,9 mm. 11 pregnancies with 10 term childbirths were registrated – 10,3% in LT groupe, 13,7% in LS groupe

Conclusions

The most often reason of uterine scar inconsistency after cesarean section is puerperal endometritis. Ultrasound investigation of scar condition with hysteroscopy allowed to identify patients who can be treated with uterus preservation in puerperal and delayed period by laparotomyc and laparoscopyc aproaches.

Hysteroscopic Sterilisation

Isolated tubal torsion: is it deferent from adnexal torsion?

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Background

Isolated tubal torsion is a rare entity and it is difficult to differentiate it from adnexal torsion (AT). The aim of this study was to compare the difference between isolated tubal torsion and AT.

Methods

A retrospective cohort study in tertiary care academic medical center. Study population included patients with proved adnexal or tubal torsion by laparoscopy during 2017. All patients underwent laparoscopy for clinical and sonographic suspected AT. Detorsion and restoration of normal anatomy was restored. Para-ovarian cystectomy was done. In non-functional ovarian cyst where the adnexa seemed viable, cystectomy was also performed. Data for all cases were collected from the medical record including demographic characteristics, clinical, sonographic, laboratory and findings during surgery.

Results

57 women has adnexa or tubal torsion proved by laparoscopy. Isolated tubal torsion was identified in 11 (19%) cases. There was no statistically significant difference between the two groups in epidemiological variables. Patients with isolated tubal torsion suffered pain for a longer period compare to patients with AT (81.8% more than a day vs 34.8% more than a day, $p=0.012$) and took longer time to seek for medical treatment (55.9 ± 56.1 hours vs 22.5 ± 27.7 hours $p=0.006$). All patients with isolated tubal torsion had para-ovarian cyst or ovarian cyst, compared with 63% of patients with AT ($p=0.023$). Para-ovarian cyst were in 40% of cases with isolated tubal torsion compare to 6.9% of cases with AT ($p=0.028$). Number of coiling were larger in isolated tubal torsion (5 vs 2.2 $p=0.000$).

Conclusions

isolated tubal torsion presented differently than AT with longer duration of pain accompanied with para-ovarian or ovarian cyst and more coiling of the twisted organ. Attention to these different may stimulate faster treatment and may reduce tubal damage.

Hysteroscopic Sterilisation

Combined hysteroscopy and laparoscopy for management of Caesarean scar ectopic pregnancy: case series report and video presentation

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Background

Caesarean scar ectopic pregnancy (CSP) is an extremely rare condition with high risk of maternal morbidity and mortality.

Methods

Three cases of uterine isthmocele - ectopic pregnancies after Caesarean section are presented. The diagnosis was made by ultrasonography, confirmed by hysteroscopy and managed by laparoscopic excision of the scar tissue together with the pregnancy tissue and suturing of the defect. The sonographic images and video of the operations will be demonstrated.

Results

First case was a 28-year-old woman, P2+2, with previous 2 CS. She had a caesarean scar ectopic pregnancy with failed surgical evacuation and systemic Methotrexate injection. She continued to have vaginal bleeding and pelvic pain until she had laparoscopic excision and repair of the scar. The second case was a 39-year-old woman, P3+3, previous 3 CS and 3 surgical evacuations for missed miscarriage. She had an isthmocele ectopic pregnancy with mean sac diameter of 25 mm which was excised and sutured laparoscopically. The third case was a 25-year-old woman, P4+1, previous 4 CS the last one was 3 months prior to her presentation to us. A combined laparoscopy and hysteroscopy performed for pelvic pain and vaginal bleeding. Diagnosis of uterine niche was made by ultrasonography. Following excision of the niche and histopathological examination of the excised tissue, it proved to have retained decidua.

Conclusions

Increasing Caesarean section rate implies that clinicians will encounter CSP more frequently, while diagnosis and management demand considerable expertise. Thin myometrium and extent of the CSP present the biggest challenges in repairing the wound after excision of the CSP.

Best practice in Minimal Invasive Surgery

Augmented reality in gynaecologic laparoscopic surgery : development, evaluation of accuracy and clinical relevance of a device useful to identify ureters during surgery.

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Background

Identification of the ureteral trajectory could be challenging in complex pelvic surgery as endometriosis and oncology. The aim of this study was to develop, on an animal model, a non-invasive augmented reality (AR) device useful to identify the ureters during surgery. Then to evaluate the clinical relevance and the accuracy of the device.

Methods

We conducted a preliminary study on 5 pigs in "IHU of Strasbourg". First we experimented on two pigs and found the best conditions to visualize the ureter with augmented reality. Then the three last pigs were each operated three times at weekly intervals. We first located the ureter, without then with the help of augmented reality. At the end of the surgery, a clip was placed on the pelvic ureter in order to evaluate the accuracy of the technique. Then we realised a second cone beam computer tomography. After segmentation we measured the distance between contrasted ureter and surgical clips which were visible in this volume.

Every surgical intervention was recorded in order to evaluate the clinical pertinence of this technique.

Results

The technical feasibility of AR was confirmed. The accuracy of the device tested on a 3D print chessboard was 0,7mm. In AR the mean accuracy in ureter localisation was 1,77mm (+/- 1,56 mm).

The relevance of the technique was tested through a questionnaire submitted to 58 surgeons (seniors and residents). Each watched 13 video sequences during which the AR technique was used. 754 answers were given (13 video x 58 surgeons). Direct vision allowed surgeons to locate the ureter in 31,2% of cases. AR vision in 81,7% (p-value $3,62 \times 10^{-7}$). After repeated surgery the ureter was identified in only 16% of cases (direct vision), 76,1% (AR vision) (p-value $5,49 \times 10^{-19}$). 61% of the surgeons estimated that the augmented reality reconstruction was precise, 67% that it helped to identify the ureter. When they were asked if "the augmented reality development could be useful to identify the ureter during laparoscopic surgery", 91% of the surgeons answered "I agree" or "I totally agree".

Conclusions

For the first time, we successfully developed an augmented reality tool that can help to visualize pelvic ureters during laparoscopy on an animal model. It is not only accurate, but also useful and the interviewed surgeons delivered positive opinions to its routine use. This surgery assistance system could be particularly helpful in severe endometriosis or in laparoscopic pelvic oncology, moreover on multioperated patients.

Best practice in Minimal Invasive Surgery

Performance of a haptic feedback graspers compared to conventional graspers in a porcine model

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Background

Compared to open surgery, minimally invasive surgery is limited by drastically reduced sensation of tissue properties. A laparoscopic grasper with integrated haptic feedback technology has been developed to provide a solution to this limitation. This Force Reflecting Operation Instrument (FROI) is a laparoscopic grasper, designed to provide information about the interaction forces between the instrument and tissue through resistance in the instrument handle. Simulation studies have been done to analyze the features of the FROI. The present study aimed to assess the functionality of the FROI compared to a conventional grasper in an in vivo setting.

Methods

In this randomized, two-period crossover trial, we used a standard laparoscopic surgical setup to perform laparoscopic surgery in pigs. Eleven laparoscopic experts performed paired colorectal, gynecological, or urological procedures, once with the FROI and once with a conventional grasper. Participants were asked to complete the NASA Task Load Index rating scale after each procedure and evaluate five specific features for both graspers on a six-point Likert scale. To capture opinions on the overall functionality of the FROI compared to a conventional grasper, participants responded to eight open questions.

Results

The surgeons reported that the use of the FROI significantly improved tissue consistency perception, arterial pulse detection, and force control, compared to the conventional grasper. No significant differences were found in surgeons' muscular strain or operative time. The most emphasized points in the open questions were the improved soft tissue handling and the importance for complex procedures.

Conclusions

This study validated the superiority of the FROI in tissue consistency sensation, arterial pulse detection, and force control, compared to a conventional grasper, in an in vivo setting. Moreover, a multispecialty group of expert laparoscopic surgeons confirmed the added value of haptic feedback technology in a live surgical setting.

Teaching and training

Gender difference in Video gaming and laparoscopic skills and their correlation

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Background

In 2017, 58% of doctors in training were female, however only 12% licensed UK surgeons are female. Although 80% of Obstetric and Gynaecology trainees are females, the majority of minimal invasive surgeons are males. While there are multiple reasons for this discrepancy, there is conflicting evidence regarding gender differences in abilities relevant to surgery, eg - visuospatial abilities, in favour of men. There is a known association between videogaming skills and laparoscopic skills. Videogaming is also considered a domain of men.

We wanted to explore if there is a difference in the videogaming skills between men and women taking into consideration their previous experience and whether this reflects on their laparoscopic skills

Methods

The study had ethics and participation permission from the local university. 27 (18 males and 9 females). 1st year medical students who have never been exposed to prior laparoscopy experience were recruited. Their video gaming experience, laparoscopic skills and video gaming skills were assessed. Demographics and their video gaming experience were assessed. Participants performed three timed laparoscopic tasks of stacking sugarcubes, threading coloured discs and cutting circles. These were objectively scored by two assessors. Participants were then evaluated on their video gaming performance on two preselected games. Each student played Operation Black ops-Zombies® (By Treyarch, Santa Monica, CA, USA) which is a first person shooter game for ten minutes on an X-box® console and then Monkey Ball Banana blitz® (by SEGA corporation, Tokyo, Japan on a Wii® console).

The association between prior usage in hours/week, video game score and laparoscopy task scores was compared using appropriate statistical tests using the SPSS v17 computer software (IBM Corporation, Armonk, NY, USA).

Results

The number of hours video gaming was played during the peak of play and the last year significantly differed between to genders, Males 2.0(0.5-6.0), females 0.0 (0.0-0.5).

The laparoscopy skills scores correlated significantly with both Xbox highest scores (Correlation coeff 0.412, P=0.033) and wii highest scores (Correlation coeff. 0.734, P=0.0001). The correlation was stronger with Wii scores than the Xbox scores. The median Xbox score for the male students of 3490 was statistically higher as compared to 970 of the female students (P=0.0001). Again, the median scores on the Wii of the male students (622291) was significantly (P=0.001), higher than the median score of the female students (42404).

However, there was no significant difference, (p=0.382) between the mean laparoscopic scores of the male students (95.8), compared to the female students (95.1)

Conclusions

The males had a significantly higher exposure to videogames , which was reflected in their video gaming scores compared to the females. Despite this there was no significant difference in the laparoscopic scores between males and females indicating that females have the same if not better ability to attain psychomotor skills where it matters.

**ES27-0288 -
Teaching and training**

Introduction of JSGOE and our future perspectives

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Background

Our society has initially been established as a small research group in 1973 with a few members, and currently our society has developed into the Japan Society of Gynecologic and Obstetric Endoscopy and Minimally Invasive Therapy (JSGOE). The society has become one of the most active professional societies for endoscopic subspecialties of gynecology and obstetrics in Japan because more than 3500 endoscopists belong to our society.

Methods

Since its foundation, our society always has been aiming to encourage the exchange of clinical experience, endoscopic techniques, teaching skills and scientific evidences among Japanese endoscopists, and the society is now encouraging the exchange between foreign countries societies for the diffusion and achievement of safe endoscopy.

Results

It is important to establish and develop sufficient systems to promote academic and clinical progress in the field of endoscopic surgery. For this purpose, the accreditation system was introduced in 2002. The society also introduced the training facility accreditation system and nationwide complication reporting system in 2014 to accredit facilities suitable for educating endoscopists with high levels of expertise and skill in performing endoscopic surgery.

Conclusions

Herein I would like to introduce our longitudinal effort to spread gynecologic and obstetric endoscopic surgery in Japan. Our future aim is mainly to spread and prevail the endoscopic techniques with preserving safety for patients.

Teaching and training

Does training improve the learning of pelvic ultrasound performed in gynaecological emergencies?

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Background

To compare the contribution of a specific training using simulation versus a only theoretical teaching in the learning of pelvic ultrasound for gynecological emergencies in novice students.

Methods

A randomized controlled trial with parallel groups was conducted in our gynecological department (University of Angers, France). All the medical students who were present at the time of the study were invited to participate. Twenty participants were randomized to a 1:1 ratio in the simulation group and control group of 10 students each. All participants received a two hours theoretical course on the physical basis of ultrasound, the use of probes, as well as the basic principles of trans-vaginal ultrasound examination. Standardized images which have to be performed in case of gynecological emergencies were also taught. The training group then had a 20-minute pelvic ultrasound training on a trans-vaginal ultrasound simulator (SYMBIONYX®). All the participants were then evaluated by a senior (blind of the randomization) on the quality of images taken directly in patients consulting for gynecological emergencies. The quality of five standardized images were evaluated: sagittal and coronal section-plans of the uterus, left and right ovarian section-plans and a Morrison pouch view. The main analysis was based on two image quality scores described by Salomon et al with the French Society for the Improvement of Ultrasound Practices (SFAPE) and by Popowski et al., Standardization Acute Female Echography (SAFE). A secondary analysis focused on the general ultrasound skills with the the Objective Structure Assessment of Ultrasound Skills (OSAUS) and the duration of acquisition of the images.

Results

At all twenty students were included. The groups were comparable. The mean SFAPE and SAFE scores were significantly higher in the simulation group (14.5 ± 3.1 , $p = 0.046$ and 10.1 ± 2.08 , $p = 0.016$) than in the control group. The mean OSAUS is significantly higher in the simulation group ($26,2 \pm 5,75$; $p=0,036$). The acquisition time of the images is not significantly different between the two groups.

Conclusions

Thanks to a short specific training session, novice students improve the quality of gynecological ultrasound performed in context of emergencies.

Safety and litigation in Minimal Invasive Surgery

Electrosurgical incident. The adverse event of a simple removal of a para-ovarian cyst

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Background

A seventeen-year-old woman presented with abdominal pain. On the transvaginal ultrasounds five-centimetre para-ovarian cyst of the left ovary was detected. Because of the pain laparoscopic surgery was performed.

Methods

A monopolar electrosurgical unit was used as normal standard laparoscopic surgery. Unfortunately an adverse event happened while removing the para-ovarian cyst which we couldn't explain at the time of surgery. At first sight this looked like a problem with isolation. A lot of reporting is known in literature about this effect. During research it appeared not to be a defect like that. To be sure the sterilization department checked the instruments and no defects were found. Our medical Physicist helped us to understand what happened.

Results

During monopolar surgery current travels along a path from the active electrode to the ground plate (GP). In a normal situation the path of the current will diverge through the structures. At first contact current density will be high and low at the ground plate. Thus, the effect you want, will happen at the beginning of the path. In this case there was a wide structure at the beginning and a very small structure close by. Instead of a diverging path, the current travelled a converging path, resulting in the adverse event.

Conclusions

From a physics point of view, it is advised to use bipolar instead of monopolar electrosurgery on those fragile structures like the ovarian tubes. In our hospital our distributor of electrosurgical units (Erbe) offered a training for medical specialists. It is recommended to take a serious look at these training. Expectations are that it will give more insight in the background techniques of electrosurgery.

<https://player.vimeo.com/video/269710729?autoplay=1>

Safety and litigation in Minimal Invasive Surgery

The use of multimedia to aid education for consenting patients undergoing gynaecological laparoscopy

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Background

Informed consent requires that patients be given sufficient and appropriate information including a clear description of treatment techniques and risk of side effects.

Objectives: To determine whether providing additional information, in the form of a multimedia video, in addition to the standard information provided on consent for laparoscopy improves doctors' knowledge about gynaecological laparoscopy and therefore improving the quality of patient consent.

Methods

35 trainees from a mixture of specialities - obstetrics and gynaecology, general practice and foundation year training, working within obstetrics and gynaecology, completed a questionnaire, assessing knowledge on laparoscopic consent. They then watched a multimedia video on laparoscopic consent and completed the same questionnaire for comparison. The main outcome measures were the Doctors' knowledge of laparoscopic complications and acceptance of the video approach.

Results

All participants have seen laparoscopic surgery during their placement within obstetrics and gynaecology. 86% having completed consent for laparoscopic procedures during this time. Only 62% of participants had read the RCOG information on consent for laparoscopy. Participants receiving multimedia video information as well as the standard RCOG information on consent for laparoscopy had significantly higher knowledge scores. 100% were acceptant of the video approach, with 86% more likely to watch a multimedia video rather than read the RCOG information leaflets. 100% stated that they would be open to showing multimedia video to patients to aid consent in the outpatient setting.

Conclusions

Videos are a reliable and consistent method of delivering information, which is structured, clear and understandable advice facilitating an increase doctors' knowledge of procedure. It can be used to effectively train healthcare professionals to ensure greater consistency and comprehensive coverage in face-to-face discussions with patients. Multimedia use is increasing and is disseminated in multiple ways including websites to healthcare professionals and also to individual patients prior to consultations/surgery.

ES27-0378 -

Safety and litigation in Minimal Invasive Surgery

Comparison of the two fascial closure technique in gynaecologic laparoscopy: A prospective randomized study

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Background

Laparoscopy is associated with less postoperative pain than laparotomy. Different surgery techniques regarding the fascia closure in laparoscopic surgery may affect the postoperative pain level.

Aim: To compare the postoperative incisional pain on postoperative days 1 and 7 between traditional fascial closure (TFC) technique with fascia closure device (FCD) (Figure 1) technique.

Methods

A total of 75 patients who were undergone laparoscopic surgery for benign indications were randomized to close the 10 mm incisional defect either TFC or FCD technique. Post-operative incisional pain on days 1 and 7 were evaluated by Visual Analog Scala (VAS). The operation time and fascia closure times were compared, as well.

Results

There were no significant differences among the groups in terms of mean ages, body mass index, gravidity, parity and mean operation time. The fascia closure time was found to be longer (112.6 ± 52.2 seconds) in TFC group than in FCD group (90.2 ± 46.7 seconds), however it did not reach a statistically significant value ($p=0.054$). There were statistically differences between VAS scores both Day 1 and 7 between groups. The VAS scores on Day 1 were 3 (0-7) in TFC group and 6 (3-10) in FCD group ($p<0.001$). The VAS scores on Day 7 were 0 (0-3) in TFC group and 2 (0-4) in FCD group ($p<0.001$).

Conclusions

The FCD in laparoscopic surgery were found to be associated with higher pain scores on incisional pain. The FCD use in laparoscopic surgery should not be used routinely, it must be kept in mind that routine use of FCD may increase postoperative incisional pain.

Safety and litigation in Minimal Invasive Surgery

Adnexal Surgery through Transvaginal NOTES

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Background

Natural Orifice Transluminal Endoscopic Surgery (NOTES) is a minimally invasive surgery approach using body natural orifices to access the peritoneal cavity, leaving no visible scars. In spite of being technically challenging, in experienced hands NOTES appears to be a feasible technique to several surgical procedures, with less post operative complications and pain, and better overall patients' satisfaction. There is few published information about pure transvaginal NOTES (vNOTES) for gynaecological procedures.

Methods

The aim of this study is to review all cases of vNOTES for adnexal procedures the authors have preformed, in order to evaluate the security, feasibility, reliability, advantages and disadvantages of this technique.

The authors reviewed all cases of vNOTES for adnexal procedures performed in Hospital Lusíadas Porto from 2012 till April 2018. Clinical data was evaluated, concerning patients' profile, surgery's indication, surgery details, expected and unexpected complications during or after the procedures, outcomes and patients satisfaction.

Results

16 patients underwent vNOTES, including adnexectomies, salpingectomies and cystectomies. Only in one case it wasn't possible to go on with the procedures due to patient's intolerance to the pneumoperitoneum, needing open abdominal surgery. All of the other 15 procedures were successfully completed, the first 3 with a 5 mm umbilical port (camera) and the following 8 with no need for an additional port. There were no expected or unexpected complications during procedures. All of the patients needed minimal postoperative analgesia and were discharged the day after surgery. There were no complications after surgeries, including infection, hernia or vaginal wound dehiscence. No patients complained of dyspareunia. One of the patients had spontaneous pregnancy after the procedure with no complications and a delivery of a healthy child.

Conclusions

Our case series shows that pure vNOTES seems to be a safe and desirable approach to the adnexa, with evident advantages comparing to conventional laparoscopy.

Safety and litigation in Minimal Invasive Surgery

Two minimally invasive repair techniques for urinary tract fistula

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Background

To demonstrate two minimally invasive methods for postoperative management of urinary tract fistula.

Methods

Two cases will be presented, one ureteral fistula and one vesico-vaginal fistula.

Results

Case 1 was found to have vaginal urine leakage one day after TLH for fibroids. Laparoscopic exploration revealed complete ureteral transection. In this case, ureteroneocystostomy with a psoas hitch was performed as repair. The involved ureter was cut and questionable tissue was removed. The cut end of the ureter was spatulated to prevent stenosis of the anastomotic site. The prevesical space is developed and the bladder is mobilized cranially. Due to the lack of length of the ureter, a psoas hitch extension was performed. After checking the ureter could be anastomosed tension-free, the appropriate site for the new ureteral orifice of the bladder was chosen and the detrusor muscle was incised to 3 times of the diameter of the ureter. The bladder mucosa was exposed. Two anchor sutures were placed at 11 and 1 o'clock. Five alignment sutures are placed at 6 o'clock, 7, 9, 3 and 5. Before anastomosis is completed, a Double J Stent is placed under laparoscopic vision (without cystoscopy). Finally the detrusor muscle is closed over the implanted ureter to create an anti-reflux mechanism.

Case 2 was found to have watery discharge 3 months after TLH for endometrial cancer. In this case we employed transvesical laparoscopic closure of the vesico-vaginal fistula. The bladder was suture fixed to the abdominal wall, we inserted a 5mm trocar into the bladder and infused CO₂. One camera port and two 3mm manipulation ports were placed in the suprapubic area in close proximity bilaterally, 2cms from the camera port. 3.0 absorbable suture was introduced into the bladder via the urethra. The detrusor muscle and bladder mucosa around the fistula were reapproximated with intracorporeal suturing. Finally the supra-public camera port was used to place an indwelling catheter.

Conclusions

Minimally invasive fistula repair is in keeping with the goals of the original laparoscopic surgery making it the best scenario for patients who experience this complication. It is advantageous for both surgeons and patients to have the skills to perform a variety of repair techniques.

<https://player.vimeo.com/video/269684186?autoplay=1>

Safety and litigation in Minimal Invasive Surgery

Vaginoscopic treatment of ureteral injury

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Background

Ureteral injury is an uncommon surgical complication and it is estimated that 52-82% of iatrogenic injuries occur during gynecologic surgery. The most common injury is inadvertent ligation of the ureter, with consequent ureteral kinking and obstruction. We report the vaginoscopic treatment of an iatrogenic ureteral injury in a young patient who underwent abdominal hysterectomy.

Methods

Step-by-step video presentation of the surgical treatment is shown.

Results

A 36 years old woman was referred to our Department with pain and heavy vaginal bleeding. The patient had a previous diagnosis of cervico-isthmic pregnancy which was removed by dilatation and suction at 10 weeks of gestation. After four days she underwent abdominal hysterectomy for uterine rupture. Four days after hysterectomy, the patient complained of lower back pain. Computerized tomography scan revealed a right ureteral injury determining ureteral stenosis near vaginal vault and the presence of ureteronephrosis. The fluoroscopy confirmed the complete stenosis, in fact neither the ureteral catheter nor the contrast medium could pass through the lower ureteral tract. Before scheduling the patient for a re-laparotomy, she underwent a vaginoscopy in inpatient setting. At vaginoscopy three stitches near the vaginal vault were identified, clogging the placement of ureteral stent. The surgical strategy was to cut the stitches in the right portion of the vaginal vault starting from the more lateral ones and progressively moving to the more medial ones. The stitches were removed carefully with 5 Fr blunt scissor, obtaining the restoring of ureteral patency.

Conclusions

Our case shows that in case of low ureteral stenosis (i.e. close to the vaginal vault) vaginoscopy could be used as a diagnostic and therapeutic tool. Larger series are needed to evaluate the potential of vaginoscopy in the management of this frequent iatrogenic complication.

<https://player.vimeo.com/video/269896216?autoplay=1>

Endometriosis 5

Endometriomas in infertility patients, resection or IVF

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Background

Clarification for the question whether to resect endometriomas in patients in infertility without pain symptoms or to proceed directly to ovarian stimulation and In-Vitro-Fertilization (IVF) and embryo transfer (ET) based on the origin of endometriosis.

Methods

Retrospective evaluation of 50 patients with endometriomas larger than 4 cm in diameter that were treated by laparoscopic endometrioma resection prior to IVF treatment and 45 patients that were treated by IVF without pre-operative endometrioma resection. In all 95 patients the semen analysis of the husband was normal. They had a minimum of 2 years of unexplained infertility, no dysmenorrhea, no acute or chronic pelvic pain and no cycle disturbances. Tubal factor was checked in some but not in all of the patients. AMH was checked pre and post operatively.

Results

The pregnancy rates of the pre IVF treated patients with laparoscopic endometrioma enucleation followed by a 3 month therapy with 2 mg dienogest daily was significantly higher than the patient group treated by IVF directly. AMH values taken pre and post operatively did not vary statistically significantly after 3 months of surgery.

Conclusions

According to ESHRE criteria endometriomas beyond the size of 3 cm should be considered for surgical resection prior to any IVF treatment. Our data strongly support this approach. However, do not add to resections of endometriomas of smaller size. It is our opinion, however, that endometriosis does interfere with implantation and we therefore suggest to refrain for a surgical resection only if the patient has been pre-operated for endometriosis and already has a low ovarian reserve. Endometriosis affects oocyte quality and quantity.

Endometriosis 5

Surgery of Rectovaginal Endometriosis – immediate, short-term and long-term complications

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Background

Deep endometriosis invades the recto-vaginal space and sometimes bowel, causing significant pain and bowel dysfunction. Treatment is indicated if symptoms are present and medical therapy isn't effective in pain control. Surgical therapy provides long-term pain relief and improved quality of life but removing deep endometriotic implants is a challenging procedure that is not free of, sometimes, serious complications. Surgery is typically performed with laparoscopy depending on the complexity of the procedure and surgeon skills. In literature, surgical therapy complication's rate is between 3 and 10%, being urinary retention the most frequent. When endometriosis involves the bowel an overall complication rate of 22.2% was reported.

Methods

It was an observational and retrospective study of all patients submitted to surgery of rectovaginal endometriosis in a period of 4 years. Data were collected between 2014 and 2017 and 130 patients were treated. Variables like age at the procedure, previous abdominal surgery, duration of the procedure, immediate, short-term (at 24hours to 7 days) and long-term (past 7 days) complications and conversion to laparotomy were analyzed.

Results

One hundred and thirty patients were submitted to surgery for rectovaginal endometriosis with a median age of 37 years. In past history, 47.7% (n=62) had previous abdominal surgery. Beyond resection of endometriotic lesions, 15% (n=20) had hysterectomy and salpingo-oophorectomy at the same time. Median time of the procedure was 102 minutes. Among complications, 3.1% (n=4) had intra-operative complications, 0.8% (n=1) short-term and 2.3% (n=3) long-term complications. One patient was converted to laparotomy for difficulties in uterine manipulation. There were no intestinal or nervous damage, no serious hemorrhage, and no infection of the trocar entry or incisional hernia. Two patients (1.5%) had ureter damage that was corrected intra-operatively. Two patients (1.5%) had urinary retention with spontaneous resolution and 2 had postoperative abdominal infection with intra-hospital care for intravenous antibiotics.

Conclusions

In literature, surgery of recto-vaginal endometriosis was associated with short and long-term pain relief between 70 to 90%, so this treatment should be offered to patients with troublesome symptoms and poor control with medical therapy. Moawad et al (2013) reported a high rate of complications of this type of surgery, particularly of procedures concerning the bowel. Kondo et al (2012) reported a rate of intraoperative complications of 2.1% and short and long-term rate of 13.9%. Our study reported a similar intra-operative complication rate, all cases identified and immediately repaired, but a lower short-term rate, and in the follow up of the patients who underwent surgery, none reported long-term adverse outcomes. It should be important to analyze the immediate and long-term complications of surgery involving bowel resection.

Endometriosis 5

Is Pelvic Inflammatory Disease more prevalent and severe in patients with Endometriosis?

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Background

The aims of this study are:

1. To establish whether the incidence of pelvic inflammatory disease (PID) or tubo-ovarian abscess (TOA) is greater in women with diagnosed endometriosis compared to women without a diagnosis of endometriosis.
2. To determine the severity of PID in women with and without a diagnosis of endometriosis.

Methods

For aim 1, we compared previously reported prevalence of endometriosis in the population to the prevalence found in the PID sample.

For aim 2, a retrospective analysis was undertaken. Women presenting to the acute gynaecological unit at a tertiary centre were analysed from January 2012-2018. Women were compared in respect to history of endometriosis and subsequent (i) likelihood of admission and (if admitted) ii) duration of stay and iii) likelihood of surgery. These three criteria served as a proxy for severity.

Results

10 women were excluded due to age (>51 years old), leaving 120 records. 16 (13.3%) of which had diagnosed endometriosis. The mean age at presentation was 34.41 ± 1.92 . 102 (85%) women were admitted, of those admitted the mean length of stay was $3.5 \text{ days} \pm 0.56$.

The sample was divided into Group 1 with diagnosed endometriosis (n=16), to be compared with Group 2 who had not been diagnosed with endometriosis (n=104). Women in group 1 were not found to have increased severity of PID compared to group 2 as quantified by the following proxies; Likelihood of admission, (15/16 (93.75%) vs 87/104 (83.65%) $P > 0.05$); Necessitating surgery, (3/16 (18.75%) vs 20/104 (19.23%) $P > 0.05$), Duration of hospitalisation if admitted ($3.53 \text{ days} \pm 1.31$ vs $3.43 \text{ days} \pm 0.62$), $P > 0.05$.

Conclusions

The incidence of PID/TOA is greater in women with diagnosed endometriosis compared to the general population. Unlike other papers in this area - no statistical significance was found between severity of PID and presence of endometriosis. This contradicts with our understanding of the pathophysiology of endometriosis suggesting further research is needed.

Miscellaneous: Complications in surgery

A retrospective review of cases with postoperative reactionary bleeding after laparoscopic surgery: optimal cut-off value of postoperative drainage predicting the need for exploratory re-laparoscopy

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Background

Postoperative reactionary bleeding is a rare but serious complication, requiring prompt diagnosis and intervention. Although routine drainage is useful for detecting bleeding, it is sometimes difficult to determine the necessity of exploratory re-laparoscopy. In this study, we aimed to identify the characteristics of cases involving re-laparoscopy for reactionary bleeding and to clarify optimal cut-off values of postoperative drainage and vital sign trends predicting the need for re-laparoscopy.

Methods

Of 5,438 patients with gynecologic benign pathologies who underwent laparoscopic surgery at our institution between 2009 and 2016, 13 (0.24%) required exploratory re-laparoscopy for postoperative reactionary bleeding. After reviewing the perioperative course in the re-laparoscopy group, we compared the initial surgical characteristics, postoperative drainage parameters, and vital sign trends in the re-laparoscopy group (n=13) and among other patients with total drainage volume ≥ 300 mL at 12 h postoperatively but who did not need re-laparoscopy (observation group, n=107).

Results

In the re-laparoscopy group, initial laparoscopic surgery included uterine surgery (myomectomy, n=7; hysterectomy, n=1), adnexal surgery (n=3), and uterine plus adnexal surgery (n=2). Postoperative bleeding sites included the uterine wound (n=6), adnexal wound (n=5), umbilical trocar site (n=1), and mesentery (n=1). In 11 cases, bleeding was successfully controlled using re-laparoscopy, whereas other two patients with hemorrhagic shock required further intervention (laparotomy or interventional radiology). The re-laparoscopy and observation groups did not differ regarding initial surgical characteristics or postoperative vital sign trends. For distinguishing between the re-laparoscopy and observation groups, drainage flow rate was superior to total drainage volume. Excessive drainage (flow rate >70 mL/h) at 1 h postoperatively increase the risk for re-laparoscopy (odds ratio, 7.23; 95% confidence interval, 1.83–34.97), and continuous excessive drainage (flow rate >50 mL/h) at 3 h postoperatively could more effectively predict the need for re-laparoscopy (odds ratio, 40.07; 95% confidence interval, 5.44–1776.41).

Conclusions

Unexpected postoperative reactionary bleeding is rare but may develop even if all aspects of surgery were addressed with utmost care. Exploratory re-laparoscopy is useful for diagnosing and treating postoperative hemorrhage. Patients with continuous excessive drainage later than 3 h postoperatively (flow rate >50 mL/h) should be considered for exploratory re-laparoscopy to enable prompt diagnosis and intervention.

Miscellaneous: Complications in surgery

Anatomical changes post panproctocolectomy resulting in problematic vaginal discharge: a case series

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Background

There is little in the literature regarding gynaecological morbidity associated with panproctocolectomy, however there is an increasing trend for women referred for persistent and debilitating vaginal discharge.

Methods

Three patients at the University Hospital of Wales are under follow-up for persistent copious offensive vaginal discharge after panproctocolectomy for inflammatory bowel disease.

Results

In all three patients vaginal examination reveals an acutely angulated vagina with fixation posteriorly to the sacrum, creating a reservoir in which discharge and menses pool. This was confirmed by MRI, and in all 3 patients enterovaginal fistula was excluded.

Treatment strategies prove challenging as the vagina becomes adherent to the sacrum filling space previously occupied by the rectum. One patient, who underwent hysterectomy, was managed surgically with laparoscopic sacrocolpopexy, however this failed following initial 4 months of symptomatic relief. The vagina returned to a retro-fixed position and vaginal discharge resumed. The remaining young women have the Mirena coil to reduce menstrual loss in an attempt to improve symptoms. Currently each patient is using a Cusco's speculum or vaginal douche to manually evacuate offensive smelling fluid. This has a negative impact on lifestyle, including sexual function, with each avoiding intercourse due to combination of embarrassing odour and dyspareunia.

Conclusions

We predict this issue is more widespread than our reported cases, as patient forums exist with women sharing stories and seeking help. Possible suggestions for surgical methods to reduce the risk of anatomical changes include close rectal excision so more mesorectum remains, thus decreasing potential dead space for the vagina to fall into.

Further research is required to ascertain the incidence of this problem and a solution developed to improve symptoms in patients with existing post-operative vaginal anatomical changes. In addition, colorectal surgeons must develop new strategies to reduce the risk of gynaecological morbidity related to bowel resections performed in non-cancer patients.

Miscellaneous: Complications in surgery

The 72 minute coffee break: improving theatre productivity

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Background

Theatre time is a valuable resource. Gynaecology theatre in the Royal Infirmary of Edinburgh costs £955/€1200 per hour. We wanted to measure how efficiently theatre time is being used currently with an overall goal to improve productivity.

Methods

Data were collected retrospectively and anonymously on all surgery undertaken in the gynaecology theatre at the Royal Infirmary of Edinburgh between January 1st 2017 and June 30th 2017. Data were collected on theatre start time, end time, turn-around time between cases, the nature of the surgery and the grade of surgeons involved. Mean duration of each category of surgery was calculated overall, when a single gynaecology consultant was involved, and when two gynaecology consultants were involved

Results

Theatre start time is 09:00, however, the mean start time of the first patient starting anaesthesia was 09:38. Mean time between cases was 72 minutes. Total laparoscopic hysterectomy with bilateral salpingo-oophorectomy (TLH + BSO) in oncology cases had an overall mean time of 145 minutes compared to a mean of 94 minutes when performed by two consultants. TLH + BSO in benign cases had an overall mean of 102 minutes compared to a mean of 87 minutes when performed by two consultants. Ectopic pregnancy had an overall mean time of 47 minutes, compared to 32 minutes when performed by two consultants.

Conclusions

Theatre start times and turn-around between cases is leading to significant time where theatre is open and staffed but not being utilised. Average time of surgery should be used to more appropriately book theatre lists depending on whether the list is being performed by one or two consultant surgeons. Theatre lists are currently compiled based on surgeon estimates on how long the anaesthetic and the operation should take. The lists do not allow for the extra 72 minutes between each case. Over and under utilisation of theatre times could be reduced and productivity increased if theatre lists were compiled based on data on past cases which is routinely collected. The nature of surgical care, the consultant's previous average time, and the experience of any surgical assistant would provide a more evidence based approach to improve productivity.

Innovations

Laparoscopic excision of a cornual pregnancy at an advanced gestational week with minimal blood loss

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Background

Ectopic pregnancy located in the intrauterine part of the fallopian tube is referred to as interstitial-cornual pregnancy which comprises 2-6% of all ectopic pregnancies. 2.5% of maternal mortalities are reported to be due to interstitial-cornual pregnancies. Laparoscopic cornual resection has been shown to be an effective treatment modality for cornual pregnancies. Uterine rupture may occur in 10% of pregnancies following a cornual pregnancy which stresses how important the proper repair of the cornual region is. The purpose of this presentation is to demonstrate an easy and effective technique for preventing blood loss during the laparoscopic treatment of an advanced cornual pregnancy using barbed sutures.

Methods

A 29 year old, G1 P0 patient presented with right lower abdominal pain and delayed menses. On transvaginal ultrasonography the uterine cavity appeared empty and a fetus with a BPD measurement consistent with 13 weeks of gestation was observed in the right interstitial-cornual area. Laparoscopic excision of the cornual pregnancy was planned due to the risk of uterine rupture and life threatening hemorrhage. Omental adhesions were dissected and the base of the cornual pregnancy was sutured using a 30cm 2/0 V-loc suture with a 30mm needle to prevent severe hemorrhage during surgery. After each suture, the string of the V-loc was pulled to strangulate the myometrial tissue. Because the cornual pregnancy had a wide base, a complete 360 degree circle could not be completed around the adnexial region of the pregnancy. The advantage of barbed sutures over non-barbed sutures is that even if a purse string cannot be completed around the cornual region, adequate hemostasis can be achieved without any tension loss and without the need to tie knots. Salpingectomy was performed starting from the fimbrial end of the fallopian tube and a 360 degree circle was completed around the cornual base with the V-loc suture. The ascending branch of the uterine artery was ligated with an extracorporeal knot. Cornual resection was performed using a bipolar system and hemostasis was achieved by suturing the cornual myometrium.

Results

The laparoscopic excision of a cornual pregnancy at 13 weeks of gestation was completed with less than 100ml of hemorrhage. The patient was discharged from hospital 24 hours postoperatively. The Beta HCg levels were negative on the third postoperative week. The myometrial thickness on the cornual region was measured to be normal on transvaginal ultrasonography on the postoperative 1st month.

Conclusions

The use of prophylactic hemostatic sutures enables the laparoscopic excision of cornual pregnancies at advanced gestational ages with minimal blood loss. The saturation of the base of the cornual pregnancy with barbed sutures in an encircling fashion is a safe, effective and easily applicable technique.

Vaginal NOTES Hysterectomy: a piloted technique in the UK and novel approach to hysterectomy

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Background

Vaginal Natural Orifice Transluminal Endoscopic Surgery (VNOTES) is of interest to gynaecologists as carbon dioxide gas is used to inflate the peritoneal cavity through the vaginal vault and laparoscopic instruments are passed through a device to access the necessary pelvic organs. This allows them to perform hysterectomies along with adenectomies vaginally. Not only has this surgery revolutionised minimal access surgery from the surgeon's point of view, it provides a platform to provide scarless surgery in a non-visible part of the human body. In addition, it has the potential to improve patient outcomes. This technique was popularised by a team at Imelda Hospital in Belgium under Dr Jan Baeklandt. At Darent Valley Hospital we set out to determine if results from this novel approach are comparable to traditional laparoscopic or vaginal hysterectomy.

Methods

In a prospective data capture of patients at Darent Valley Hospital and Benenden Hospital, the first units in the United Kingdom to have pioneered VNOTE Hysterectomy to our knowledge, we collated data on a private shared drive noting patient demographics, indications for surgery, operation details and follow-up data.

Results

Between January and May 2018, sixteen patients underwent surgery between two units. Indications for surgery included endometrial hyperplasia, endometriosis, menorrhagia, and prophylactic surgery in BRCA positive patients. Ages ranged from 41-75 (mean 50.5), BMI from 24-36 (mean 30.1). Operation time was between 46-110 minutes (mean 67.5). Blood loss intraoperatively was <500mls in 94%. Length of stay was between 1-2 days (mean 1.3). There were no intraoperative complications and there were no postoperative complications at six week follow-up. Only 6% required patient controlled analgesia postoperatively and 88% of patients went home with non-steroidal analgesia only. Advantages over traditional laparoscopic hysterectomy are: 1) Requirements for intra-abdominal pressure are lower at 8-11mmHg 2) absence of trocar related injuries 3) reduction in assistants to one person as there is no need for manipulation 4) patients with morbid obesity where abdominal access and exposure may be difficult 5) advantages in patients with previous midline laparotomies or mesh hernia repairs 6) reduced requirement for head down. Advantages over traditional vaginal hysterectomy are better access, with non-descent non-problematic as long as the pouch of douglas and uterovesical fold can be entered. Both tubes and ovaries can be removed easily due to better access and visibility. VNOTE surgery may not be suitable for women with multiple previous caesareans, previous surgery to the rectovaginal pouch or rectovaginal endometriosis. We would also not recommend this for patients who require concomitant excision of endometriosis.

Conclusions

Although our numbers are small, when compared to laparoscopic hysterectomies this seems to be less invasive and has comparable hospital stay and recovery. Plans for an international multicenter Randomised Controlled Trial are underway.

<https://player.vimeo.com/video/269928293?autoplay=1>

Innovations

Cervical ectopic pregnancy: methotrexate vs uterine artery embolization

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Background

To evaluate the modern strategy for preserving fertility in patients with cervical pregnancy.

Methods

58 women with cervical pregnancies (ages 25-47 years) were treated in Operative Gynecology department during 12 recent years. 33 of them underwent combined therapy with preoperative systemic methotrexate chemotherapy (early observations) and in 14 cases with chorion invasion into the cervix we used selective uterine artery embolization (SUAE) following with minimal invasive surgery (resectoscopy) for preserving fertility. Additional laparoscopic removal of ovarian teratoma was performed in one case.

Results

Clinical protocol included transvaginal ultrasound investigation with transducer for color Doppler mapping, MRI to visualize gestational sac, boundaries between the chorion and stroma of the cervix; assessment of the blood flow in the chorion, the evaluation of β -hCG in serum. In 55 cases diagnostic hysteroscopy and followed resectoscopic removal of the chorion and coagulation of the vessels were performed. The term of pregnancy on admission ranged from 5 to 9 weeks of gestation and the average term was $6,4 \pm 0,8$ weeks. Patients with cervical pregnancy received i/v methotrexate at an average of 50 mg/every 48 hours, 6 mg of leucovorin administered i/m after 28 hours after methotrexate injection. The total dose of administered methotrexate ranged from 200 to 300 mg and depended on the patient's body weight, week of gestation, level of β -hCG and intensity of chorion blood flow. Surgical procedure started at decreased level of β -hCG about 4000-7000 IU/l. SUAE on both sides applied in 12 cases through the right femoral approach and in 2 cases through the right radial artery. Hysterectomy was performed in 3 cases. The effectiveness of organ-sparing treatment of cervical pregnancy is 94,8%.

Conclusions

The results of our study suggest that resectoscopic removing of embryo with previous cytostatic therapy with methotrexate allows to save fertility in young women with early cervical pregnancy. SUAE provides minimal operative bloodloss, more shorter hospital stay and does not hurt reproductive function.

Hysteroscopy | Hysteroscopic Fibroid Removal

12-month primary clinical endpoints and safety analysis of the SONATA pivotal IDE trial: sonography-guided transcervical radiofrequency ablation of uterine fibroids

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Background

The Sonata® System is a transcervical device to ablate uterine fibroids with radiofrequency (RF) energy, guided by intrauterine sonography provided by an ultrasound probe integrated within the system. The SONATA pivotal IDE trial was designed to establish the safety and effectiveness of the Sonata System in the treatment of symptomatic uterine fibroids.

Methods

This was a prospective, longitudinal, multicenter, single-arm trial conducted under an FDA Investigational Device Exemption (IDE) at 22 clinical sites in the US and Mexico and involving premenopausal women between the ages of 25 and 50 with heavy menstrual bleeding secondary to fibroids. Transcervical, intrauterine ultrasound-guided radiofrequency ablation with the Sonata System was performed on up to 10 fibroids per subject ranging from 1-5 cm in diameter as determined by transvaginal sonography. The co-primary efficacy endpoints assessed at 12 months were menstrual blood loss reduction and absence of surgical reintervention. The study evaluated safety by reporting of any device and procedure related adverse events (AEs).

Results

One hundred forty-seven patients were enrolled and treated. Ninety-four percent of patients experienced a reduction in menstrual bleeding from baseline to 12 months post-ablation, with over 90% of patients reporting reduced menstrual bleeding within 3 months. This study met the co-primary endpoints at 12-months post-ablation, as 64.1% of patients (95% confidence interval [CI] 55.6–72.0%) experienced $\geq 50\%$ reduction in menstrual bleeding and 99.3% of patients (95% CI 95.1–99.9%) were free from surgical reintervention. At baseline, the mean pictorial blood loss assessment chart (PBAC) score was 303.6 ± 98.6 ; this decreased by 38.9%, 47.9% and 50.7% at 3, 6 and 12 months post-ablation, respectively ($P < .0001$, Wilcoxon Signed Rank Test). The percentage of patients achieving either co-primary endpoint did not significantly vary by ethnicity and were similar for White, Black and Latina patients. There were no device related AEs.

Conclusions

Transcervical radiofrequency ablation with the Sonata System was shown to be a safe and effective treatment for symptomatic uterine fibroids, providing a significant reduction in fibroid symptoms with minimal surgical reintervention and morbidity.

Hysteroscopy | Hysteroscopic Fibroid Removal

Clinical outcomes of the OPEN clinical trial: evaluation of uterine patency following sonography-guided transcervical radiofrequency ablation of fibroids with the Sonata® System

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Background

The Sonata® System is a transcervical device to ablate uterine fibroids with radiofrequency (RF) energy, guided by intrauterine sonography provided by an ultrasound probe integrated within the system. This study documents the presence or absence of intrauterine adhesions after treatment with the Sonata System when used in women with submucous and/or transmural fibroids.

Methods

This is a post-market prospective, multicenter, single-arm cohort study involving institutions in four EU nations and utilizing an independent external hysteroscopy review panel. All patients must have at least one FIGO type 1, type 2 or type 2-5 (transmural) fibroid, and a baseline European Society for Hysteroscopy (ESH) adhesion score of 0 as determined by diagnostic hysteroscopy. Transcervical, intrauterine ultrasound-guided radiofrequency (RF) ablation of symptomatic uterine fibroids with the Sonata® System followed by second-look hysteroscopy at 6 weeks post-treatment. No adjunctive measures to prevent adhesiogenesis were permitted, nor concomitant procedures that might promote adhesions (eg, D&C). Video from each hysteroscopy performed at the baseline and 6-week visits were assessed and scored by two external reviewers, with a third to resolve any disputes.

Results

Twenty-six patients have been enrolled and treated to date, with completed evaluations (second-look hysteroscopy and baseline and second-look ESH scoring by two readers) available at this time for 13 patients. There were no adhesions noted (ESH scores = 0) for the 13 evaluated second-look hysteroscopies.

Conclusions

The literature indicates a varying level (1.5%-78%) of adhesiogenesis associated with hysteroscopic myomectomy and other intrauterine procedures. This may relate to the presence of disruption of the basalis layer of the endometrium. The Sonata System is designed to minimize or avoid disruption of this layer, and the encouraging initial results of the OPEN clinical trial suggest little or no risk of adhesiogenesis.

Laparoscopy | Techniques for Laparoscopic Hysterectomy

Uterine dimensions and laparoscopic hysterectomy: a comparative retrospective study

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Background

Objectives: The aim of this study was to analyse and compare the outcomes regarding laparoscopic hysterectomy for benign pathology with laparotomy and vaginal approaches, and to evaluate the effect of uterine dimensions.

Methods

Retrospective and comparative study based on clinical records of a sample of 1000 patients that underwent hysterectomy between 2014 and 2017, in a reference hospital. Three groups were established: (1) laparotomy, (2) vaginal and (3) laparoscopic. Demographic, pre and post-operative data were analysed concerning benign pathology. Statistical analysis performed with SPSS Software Statistics 20.0 with a significant p-value <0.05.

Results

Of the 1000 hysterectomies, 53.7% (n=537) were performed for benign pathology. From those, 62.9% (n=338) had laparotomy approach, 6.9% (n=37) vaginal and 30.2% (n=162) laparoscopic. Myometrial pathology was the main indication (83.1%). Regarding laparoscopic hysterectomy, the mean age was 48.0±6.3 years, body mass index was 25.7±5.2 kg/m² and 13.0% of women were postmenopausal (n = 21). No statistical difference was noticed in demographic variables between patients of each group, indicating the groups were homogeneous.

For laparoscopic approach, mean operative time was 146.0±35.8 minutes and mean length of hospital stay was 3.4±1.3 days, which were significant longer (p=0.032 and p=0.029) when comparing with vaginal approach. No statistical differences concerning operative time or hospital stay were found comparing with laparotomy. No significant differences were noticed concerning complications, anaemia and transfusion rate between study groups.

Ultrasound uterine dimensions in overall sample were 90.5±29.1, 61.8±23.6 and 66.8±21.5mm referring to longitudinal, antero-posterior and transversal diameters, respectively. In laparoscopic approach the mean longitudinal, antero-posterior and transversal diameters were 80.9±22.9, 55.2±14.7 and 62.0±15.9mm, which were significant lower comparing with laparotomy (p<0.001). Regarding vaginal route there was no significant difference comparing with laparoscopy. Global average uteri weight was 294.1±305.7g, 188.8±122.5g in laparoscopic group, 160.3±90.8g in vaginal and 358.2±359.0g in laparotomy. Uteri was significantly heavier (p<0.001) in laparotomy than laparoscopy and there were no differences accounting vaginal approach.

Laparoscopic versus laparotomic ROC curve analysis revealed a sensitivity of 61.4% and specificity of 60.7% for an antero-posterior diameter cut-off of 59.5mm and a sensitivity of 63.5% and specificity of 61% for a cut-off of 187.5g uterus towards laparotomy approach. Laparoscopic versus vaginal ROC analysis was non-significant differences.

Conclusions

Minimally invasive approaches to hysterectomy remain preferably chosen in small and low weight uteri. However, laparoscopic approach to enlarged uteri is technically feasible and a safe procedure, despite conditioning a higher operative time.

Laparoscopy | Techniques for Laparoscopic Hysterectomy

Total Laparoscopic Hysterectomy for large cervical fibroids: case series

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Background

Hysterectomy for large cervical fibroid represents a challenge to laparoscopic surgeons due to close proximity and possible pressure effect on urinary bladder and both ureters.

In this study we assessed the feasibility and safety of total laparoscopic hysterectomy (TLH) for treatment of cervical fibroids larger than 5 cm.

Methods

We reviewed our TLH database for cases of cervical fibroids larger than 5 cm.

In lithotomy position; the urologist performed cystoscopic insertion of bilateral external ureteric catheters followed by trocar placements by the gynecologist.

Early division of the vesico-uterine attachment with tactile assessment of ureteric catheters by laparoscopic graspers enabled to save the ureters and urinary bladder early. TLH was done classically without enucleating the myoma. Uterus was extracted through the vagina (after cold morcellation if needed).

All baseline and perioperative data were reviewed and reported case by case.

Results

From July 2017 to May 2018, out of 70 cases of TLH, 6 patients had cervical fibroids larger than 5 cm.

The median myoma size was 7.6 cm(6-12 cm). The myoma was located central in 2 , posterior in 1 and lateral in 3. No need for conversion in any case. Mean operative time was 90(+12) minutes. Mean operative blood loss was 180(+20) ml. Urethral and ureteric catheters were removed first day postoperative in all cases except one case; they were left for 7 days following laparoscopic repair of accidental bladder injury.

No major postoperative complications were reported. All specimens were found histologically benign.

Conclusions

TLH seems to be a safe option in cases of large cervical fibroids when done with multidiscipline uro-gynecological care.

Laparoscopy | Techniques for Laparoscopic Hysterectomy

Mode of hysterectomy for benign disease – an evaluation of outcomes

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Background

Hysterectomy for benign disease can be performed by various routes, usually determined by the size and accessibility of the uterus, parity and patient and surgeons' preference. Current evidence suggests laparoscopic and vaginal routes shorten length of hospital stay and return to normal activity compared with abdominal hysterectomy. However, with increasing use of laparoscopic techniques, vaginal hysterectomy is becoming a lost art. Laparoscopic techniques are associated with longer operating time and increased risk of urinary tract injuries. We evaluated outcomes of hysterectomy for benign disease by various routes at Norfolk and Norwich University Hospital (NNUH) over 12 months.

We aimed to compare the outcomes of abdominal, laparoscopic and vaginal hysterectomy procedures undertaken between January and December 2016. Our primary outcome measures were length of stay, operative time and complication rates.

Methods

All hysterectomies performed at NNUH over a 12-month period (January to December 2016) were retrospectively identified using ORSOS (surgical information systems software). Hysterectomies for malignancy were excluded. Outcome measures were identified manually from electronic records.

Results

238 hysterectomies were undertaken in total, of which 72 were total abdominal hysterectomies (TAH), 35 total laparoscopic hysterectomy (TLH), 38 laparoscopic assisted vaginal hysterectomies (LAVH) and 93 vaginal hysterectomies (VH).

The patient demographics including age and BMI were homogenous across all four groups.

Mean length of stay was shorter for vaginal and laparoscopic routes, (LAVH 31hours, VH 35.5hours, TLH 38hours) compared with TAH (64hours).

Mean operative times were longest for laparoscopic routes (TLH 138mins, LAVH 129mins) when compared with TAH (99mins) and VH (87mins).

Rates of blood loss >500ml by mode of hysterectomy were 16.7% for TAH, 2.6% for LAVH and 1.1% for VH and 0% for TLH in our cohort. The postoperative infection rates were highest for TAH (5.5%).

Two patients in the LAVH group sustained bladder injuries (5.2%). Four patients had a post-operative vault haematoma; two following TAH (2.7%), and two after VH (2.1%).

Conclusions

Our findings of shorter length of stay for vaginal and laparoscopic hysterectomy compared with abdominal hysterectomy are similar to previous studies. Due to the technique and the local anaesthetic used in LAVH and VH, patients were more comfortable and half of them were discharged within 12 hours of the procedure with a quicker return to normal activities.

Intra-operative blood loss and infection rates were highest for TAH. Our outcomes are similar to previous large studies comparing routes of hysterectomy. Two patients in our LAVH group sustained bladder injuries, results comparable to larger studies.

Vaginal hysterectomy should be the preferred route of hysterectomy for benign cases where ever possible. Where vaginal hysterectomy is not technically feasible laparoscopic route should be considered and the decision should be on an individual case basis.

ES27-0360 - Fibroids and morcellation

Uterine sarcomas : pre operative diagnosis and follow up over 16 years

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Background

Pre operative diagnosis of sarcomas prior to Minimally Invasive Surgery is very challenging. Fibroid morcellation is jeopardized but recent series of sarcoma morcellations

Methods

We present the pre-operative diagnosis and follow up of the largest series of uterine sarcomas diagnosed among a continuous cohort of 3616 patients referred for fibroid treatment by MIS. This is a Prospective study Canadian Task Force classification II-2 realized in a University Hospital. 3616 patients were referred for treatment of fibroids between 01.01.2002 and 01.01.2018

All patients had a clinical examination, endometrial sampling, pelvic ultrasound, MRI. Patients were treated by laparoscopy, hysteroscopy, vaginal procedure, Uterine Artery Embolization (UAE) or a combined procedure of UAE and MIS, both first described in our department in 1997 and 2002 respectively, or by laparotomy. Every diagnosis of sarcoma was reviewed by a panel of pathologists.

Results

70% of the patients were treated by laparoscopy, hysteroscopy, with a vaginal procedure, or by UAE. 28 patients had a final diagnosis of sarcoma, all of them being suspected of hypercellular fibroid or sarcoma prior to surgery. No occult morcellation was reported while the incidence rose from 1/500 symptomatic fibroids in 2002, to 1/217 in 2017, with no changes in our pre-operative diagnosis method nor further specific referral. The survival rate at 5 years was 40% while all patients were diagnosed prior to surgery.

Conclusions

The rising incidence of uterine sarcomas is a major concern and while the epidemiology has changed over the last 16 years we report the largest series of sarcomas diagnosed among fibroids with no occult morcellation, with a survival rate of 40% at 5 years.

Endometriosis 6

Ureteral endometriosis: risk factors for major ureteral surgery

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Background

Endometriosis, is an estrogen-dependent disorder that affects 10%–20% of all women in reproductive age, increasing to 35%–50% in symptomatic patients. Endometriosis can spread almost everywhere on other extragenital systems, affecting urinary tract with an incidence from 0.3 to 12% of all women with endometriosis. In the last few years many paper were published trying to find risk factors that can suggest the presence of UE. Preoperative data, US evaluation and surgical data were analyzed in this study to find any possible indicator of ureteral involvement in deep endometriosis and for major invasive ureteral surgery.

Methods

Design: retrospective cohort study

Setting: Malzoni Clinic – Center for Advanced Gynecological Surgery, Avellino, Italy

Patients: 189 patients underwent surgery for DIE with monolateral ureteral endometriosis between January 1, 2015, and December 31, 2017 were retrospectively extrapolated from our center database

Intervention: study population was split into two different groups: patients underwent ureterolysis only (Group 1) and patients needed a stent positioning due to surgical procedure (Group2)

Results

128 women underwent surgery with ureterolysis only (GP1), 61 women needed a ureteral stent due to more invasive surgery on the ureter (GP2). We used stent positioning as a marker for aggressive surgery on the ureter. We observed that more invasive surgery on the ureter occurred in older patients (41,2 yrs \pm 5,54; $p < 0.0001$), with concomitant involvement of the ipsilateral ovary ($p 0.043$), retrocervix ($p 0.008$), ipsilateral parametrium ($p < 0.0001$), sigmoid ($p 0.003$), rectovaginal septum ($p 0.013$) and bladder ($p 0.0003$). Additional bladder surgery was performed in 19,7% GP2 vs 3,12% GP1 ($p 0.0003$). Additional bowel surgery was performed in a high percentage of patients (GP1 68,75%; GP2 73,8% $p > 0.05$) but bowel resection was performed more often in GP1 (89,8%) than GP2 (62,2%) ($p 0.0003$). Conversely bowel nodule shaving was performed more in GP2 (37,8% vs 10,2; $p 0.0003$). We calculated the mean sonographic distance of the major nodule from the anal verge was $12 \pm 2,86$ cm in GP1 group and 9 ± 3 cm in GP2 group ($p < 0.0001$).

Conclusions

We found a significant association between parametrial endometriosis ($p < 0.0001$), sigmoid (0.003), retrocervix (0.008) and the need of intensive surgery on the ureter. Caudal rectal nodule was related to an higher risk of parametrial involvement and major ureteral surgery. However in this case, predominant asymmetrical parametrial disease didn't request an aggressive bowel surgery.

ES27-0155 -

Endometriosis 6

Managing intraoperative ureteral injury with robotics

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Background

We will present some repair scenarios for inadvertent ureteral injuries that occurred intraoperatively during robotic surgery.

Methods

We will present 2 cases. Patient 1 underwent robotic radical trachelectomy for stage 1b1 cervical cancer. Patient 2 underwent total vaginectomy combined with a radical hysterectomy for stage IIIa cervical cancer. Both of these cases required ureteroneocystostomy. For successful reconstruction, we first remove questionable tissue. Then the cut end of the ureter was spatulated to prevent stenosis of the anastomotic site. The prevesical space was developed and the bladder was mobilized cranially. The appropriate site for the new ureteral orifice of the bladder was chosen and the detrusor muscle was incised to 3 times of the diameter of the ureter. The bladder mucosa was exposed. Two anchor sutures were placed at 11 and 1 o'clock. Five alignment sutures are placed at 6 o'clock, 7, 9, 3 and 5. Before anastomosis is completed, a Double J stent is placed under laparoscopic vision (without cystoscopy). Finally the detrusor muscle is closed over the implanted ureter to create an anti-reflux mechanism.

Results

This procedure takes approximately 60 minutes. Minimal blood loss was recorded in these patients and both patients had no stenosis, leaks or complications.

Conclusions

While avoiding intraoperative injury is the key, understanding how to manage repair is also important for keeping the surgical environment safe. Knowledge of urinary tract reconstruction is necessary and important for avoiding conversion to laparotomy once injury occurs. As robotics can control random movements such as tremors or spasms, it offers the advantage of stability in surgery where fine suturing and movements are required. For successful reconstruction tension, torsion and angulation-free adaptation are basic tenets of good reconstruction along with good blood perfusion and the removal of all damaged and questionable tissue.

<https://player.vimeo.com/video/269678274?autoplay=1>

Imaging

A new ultrasound integrated Enzian classification to stage pelvic endometriosis: feasibility and interobserver reproducibility

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Background

To determine the feasibility and the interobserver reproducibility of a new ultrasonographic classification of endometriosis based on an integration of the three-compartmental Enzian score for deep endometriosis with an additional three level evaluation of pelvic sites of disease.

Methods

Two operators (observer A and B), independently and blinded, performed TVS (transvaginal sonography) in 30 patients affected by pelvic endometriosis. An accurate ultrasound mapping of the disease, according to previously published studies, was performed, followed by a classification of all lesions based on a new integrated Enzian classification, reported by each operator for the same patient. This classification combines the Enzian score for DIE in three pelvic compartments (A, B, C) in addition to a three level classification for other compartments: ovary (D), tube (FT) bladder (FB), adenomyosis (FA) and adhesions (E). Rate agreement and reproducibility of the new classification system were assessed between the two operators.

Results

Multiple rate agreements to classify endometriosis, according to the integrated Enzian classification based on three levels in different compartments, ranged from substantial to almost perfect (Cohen k 0.758 – 1) except for compartment B in which interobserver agreement was moderate ($k= 0.579$).

Conclusions

Our new ultrasound integrated Enzian classification system for the sonographic evaluation of pelvic endometriosis is reproducible and easy to use in clinical practice. The standardization of transvaginal diagnosis of endometriosis and of its extension in the pelvis are crucial for the correct management and surgical approach.

Imaging

Pre-operative ultrasound characteristics of Borderline ovarian tumours

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Background

The aim of this study is to determine if there are ultrasound signs or markers that will distinguish borderline ovarian tumours from other complex benign ovarian masses in order to assist in surgical planning. The presentation will include ultrasound images from the study to illustrate findings.

Methods

Retrospective review of pre-operative ultrasound reports, 2D images, and postoperative histopathology of 90 women diagnosed with Borderline ovarian tumour between 2010 and 2017 at Maidstone and Tunbridge Wells NHS Trust. Comparison was made with the ultrasound records of 100 women diagnosed with benign mucinous or serous cystadenoma on histopathology.

Results

Features associated with borderline tumour were one or more papillary projections (16.6 % of borderline cases v 4% of benign), one or more solid components (38.8% borderline v 11% benign), and vascularity demonstrated by power doppler (26.7% borderline v 8.0% benign). Features not associated with borderline tumour were; size (maximum diameter of benign cystadenomas and borderline tumours up to 260mm) and multilocularity with one or more septations within a cyst associated with 34 % of borderline and 55% benign cysts. Bilateral cysts occurred in 12.2 % of borderline cases and 11% of benign cases.

Only one patient with borderline tumour demonstrated ascites. No patients with benign histology demonstrated ascites.

Conclusions

Presence of the following specific ultrasound features in a complex ovarian mass are associated significantly more with borderline tumours than benign complex masses; papillary projections, solid components within a cyst and vascularity .

These findings would support careful surgical planning to ensure optimal staging of disease at laparoscopy or laparotomy and would guide counselling toward hysterectomy and bilateral salpingo-oophorectomy if fertility is not desired.

Imaging

Ultrasound-guided transvaginal biopsy for diagnosis of ovarian cancer

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Background

Ultrasound-guided transvaginal biopsy is minimally invasive and simple. The purpose of this study was to observe the accuracy, safety and economy of this method.

Methods

This was a retrospective study. A cohort of 81 patients with suspected advanced ovarian cancer underwent transvaginal biopsy guided by ultrasound from April 2014 to March 2018. The mean age was 58.63 ± 10.66 y and CA125 was 1561.37 ± 1517.87 U/ml. After confirmation of malignant tumor, the patients received neoadjuvant chemotherapy for 2 or 3 cycles and then surgery. By April 2018, 52 patients of this cohort had received cytoreductive surgery. In the same period, 54 patients with suspected advanced ovarian cancer underwent laparoscopic biopsy with an average age of 53.65 ± 12.54 y and CA125 of 1325.10 ± 1233.54 U/ml. The operation time, blood loss, infection rate, length of stay and cost of hospitalization of the two groups were compared.

Results

The procedure was successful in all 81 patients and the success rate of transvaginal biopsy was 100%, 77 cases of malignant tumor were diagnosed, the diagnostic rate was 95.06% (77/81), and 56 of them received neoadjuvant chemotherapy, 3 of 4 negative cases subsequently received surgery. Successful histological confirmation was achieved in 49 of 52 patients with surgery confirmed ovary malignant tumor and the accuracy rate was 94.23% (49/52) up to now. There were no procedure-related complications. Compared with the laparoscopic biopsy group, the operation time of Ultrasound-guided transvaginal biopsy was 19.75 ± 5.47 min vs 76.19 ± 53.33 min ($P=0.00$), the blood loss was 0.91 ± 0.94 ml vs 42.22 ± 87.63 ml ($P=0.00$), the infection rate was 0/81 vs 5/54 ($P=0.01$), the length of stay was 8.59 ± 5.10 d vs 12.30 ± 4.74 d ($P=0.00$), and the cost of hospitalization was 15831.69 ± 6317.25 ¥ vs 29664.36 ± 8553.51 ¥ ($P=0.00$). All indicators were significantly reduced.

Conclusions

Ultrasound-guided transvaginal biopsy is an accurate, safe and economical method for diagnosis of ovarian cancer.

Endometriosis 7

Identification of fallopian tubal endometriosis: a cross-sectional study on the prevalence and clinicopathological characteristics

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Background

To investigate the prevalence of fallopian tubal endometriosis (EM) and the associated clinicopathological characteristics in a cross-sectional study.

Methods

A total of 1189 premenopausal women were recruited from the International Peace Maternity and Child Health Hospital affiliated with Jiao Tong University, shanghai, China.

The study included patients who underwent unilateral or bilateral salpingectomy due to gynecological diseases except for ectopic pregnancy. Patients' clinical data and the fallopian tube were collected. Hematoxylin-eosin and CD10 immunohistochemistry confirmed TEM.

Results

A total of 161 premenopausal patients were diagnosed with tubal EM. The prevalence of tubal EM was relatively higher among women with EM diseases (pelvic EM, ovarian endometriosis cyst, uterine seromuscular EM and deep infiltrating EM,) than those with non-EM gynecological diseases and adenomyosis/adenomyoma. The prevalence of tubal EM among premenopausal women with pelvic multi-organ EM was significantly higher than that among women with single-organ EM. In the isthmus of the fallopian tube, the ectopic endometrium was frequently located in the mucosa, while in the ampulla, it was mainly involved in serosa and sub-serosa. The prevalence of hydrosalpinx/hemosalpinx was remarkable in women with tubal EM and the prevalence of tubal EM increased with severity of EM. Women with previous EM surgery or ligation faced a high risk of tubal EM.

Conclusions

The prevalence of tubal EM among patients with gynecological diseases except for ectopic pregnancy was higher than that reported by previous studies. Women with multi-organ EM diseases were predisposed towards tubal EM than those with single-organ EM and without EM diseases.

Endometriosis 7

Multiple concomitant resections in deep endometriosis surgery

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Background

Objective : to report postoperative outcomes after multiple concomitant resections involving digestive and / or urinary tract for deep endometriosis infiltrating rectum ,colon ,cecum ,ileon ,blader and ureter .

Methods

Design : a retrospective study on a cohort of 14 patients operated in the last 18 months which had underwent at least two different concomitant resections for deep infiltrating endometriosis.

Setting : a tertiary referral center in a private setting

Interventions : rectal segmental resections combined with ceccal resection or ileon resection and /or bladder resection and /or ureteral resection or reimplantation .

Results

Measurements and results :

From 14 patients enrolled ,10 suffered 2 resections ,3 suffered 3 resections and 1 suffered 4 resections .

In all 14 patients we performed segmental rectal resection for stenotic nodules more than 4 cm. We performed 3 ureteral resections and 1 ureteral reimplantation with Boari flap .In 7 patients we performed bladder resections There were 3 ceccum resections ,3 ileon resections and 2 sigmoid/colon resections .We performed only 3 protective stomas.

Mean operative time was 250 min (160-360 min) .

We had one intestinal fistula and 4 patients (22%) developed functional complications (LARS syndrome or transient bladder atony)

Conclusions

Conclusion :complex deep infiltrating endometriosis cases ,with multiple lesions require multidisciplinary surgical teams ,prolonged operating efforts and are threatened by serious complications .

Endometriosis 7

Improvement in Bowel symptoms post excisional surgery for Stage 4 endometriosis – is disc resection a necessity?

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Background

Stage 4 endometriosis can lead to a multitude of symptoms affecting the bowel. Our multidisciplinary committee (MDT) for Stage 4 endometriosis patients discusses and plans the management, especially surgical, of these most complex patients. The meetings contains consultants from gynaecology, radiology, colorectal surgery and when relevant a consultant urologist.

Given the nature of Stage 4 endometriosis, planning of the surgery involves mainly deciding on the difficulty level in carrying out either laparoscopic excision of disease, or a definitive hysterectomy and bilateral salpingoophorectomy with reference to the level of bowel involvement and the need for the presence and surgical assistance of the colorectal surgeons.

The MDT has been in place since 2013, and not one patient has had a disc resection carried out by the colorectal team, as at the time of surgery the potential advantages did not outweigh the potential morbidity.

Methods

The main aim of this study is to assess the impact of conservative surgical treatment of Stage 4 disease on the bowel symptoms and quality of life scores of these patients using a questionnaire. The surgery carried out involved removing all visible disease (this included hysterectomy +/- bilateral salpingoophorectomy in those who required and/or requested it) and restoration of normal anatomy but stopped short of formal disc resection.

In this study we define severe endometriosis as involving the para-rectal area, according to British Society of Gynecological Endoscopy(BSGE) criteria.

The cohort evaluated includes all patients who underwent surgical treatment to Stage 4 endometriosis from January 2013 to December 2017 as listed on our BSGE Database.

All patients who underwent surgical treatment to Stage 4 endometriosis completed the standardised BSGE Quality-of-Life and symptom questionnaire pre-and post-operatively at 6, 12 and 24 month intervals. Two independent authors reviewed the data.

Results

The study included a total of 85 patients. Both cyclical and non-cyclical dyschezia showed statistically significant improvement at 6, 12 and 24 months post surgical management. Patients who suffered bowel frequency, incomplete emptying and bowel urgency did not show improvement at 6 months but all symptoms showed statistically significant improvement at 12 and 24 months. Patients who suffered either symptoms of constipation or blood in stools showed

statistically significant improvement at 6, 12 and 24 months. In addition Quality of Life (QoL) scores showed statistically significant improvement at 6, 12 and 24 months.

Conclusions

Conservative surgical treatment of Stage 4 endometriosis improves both bowel symptoms and quality of life. All bowel symptoms showed improvement at 12 and 24 months post surgery bringing into question the need for radical bowel surgery. As endometriosis is a life limiting but not a life threatening condition, the potential for unnecessary surgical morbidity from bowel surgery needs to be gravely considered.

ES27-0044 -

Reproductive Medicine

Vaginal posterior isthmic sling: efficacy and tolerance

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Background

Abstract Body: Objective: To report the first consecutive cases of posterior isthmic slings; comparing efficacy and tolerance to Richter's sacrospinofixation, and tolerance to posterior vaginal mesh. Design:

Methods

This study is descriptive, retrospective and single-centered. It includes women who had vaginal surgery for prolapse between 2010 and 2016. Women included in the study had or a sacrospinofixation, or a posterior isthmic sling or a posterior vaginal mesh.

Results

214 women were included (58 in the posterior isthmic sling group, 17 in the Richter group and 139 in the posterior mesh group). The ensuing POP-Q assessment of the Richter and posterior isthmic sling groups does not show any difference between the two methods. Women's satisfaction level in the posterior isthmic sling group is 8.1/10 [7,3-8,8], which is equivalent to the level of satisfaction observed in the 2 other groups. Concerning dyspareunia, sexual relations, discomfort, complications and subsequent repeat surgeries, these are also comparable between the 3 groups.

Conclusions

Efficacy and tolerance of the posterior isthmic sling seems comparable to sacrospinofixation. It might then be an option for mid-level prolapses. A non-inferiority trial should be performed to be able to conclude on the place of this alternative to sacrospinofixation.

Reproductive Medicine

Uterine fibroid surgery – impact on reproduction

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Background

Pregnancy rate in patients with fibroid related infertility with uterine cavity deformation is 14%, and rate of miscarriages is 46.7%. At the age of 35 years the incidence of uterine fibroids increasing up to 52%, but only 20% of all fibroids became symptomatic.

Methods

We analyzed results of 721 myomectomies from 2010 till 2014. Observation period was 14-88 months. Average diameter of maximal size fibroid was 43,25mm. Average uterine size was 8,46 weeks. Subserosal location (type 7 FIGO) was detected in 295 cases (40,7%), submucosal location was identified in 7,76% cases, type 1 in 11,2%, type 2 in 15,1% of patients. Intramural location of fibroids (type 5-6 FIGO) was detected in 43,5% cases. In 51,8% cases fibroids were located on anterior uterine wall, in 55,3% cases on posterior wall, in 28,7% cases fibroids were located in uterine fundus.

Results

laparoscopic myomectomy was done in 502 patients (69,6%), laparotomic access was required in 13% cases. Hysteroscopic myomectomy was performed in 141 (19,9%) patients. In 26 (3,6%) cases combined access was required. Conversion was detected in 7 (0,97%) cases, 3 of them from laparoscopy to laparotomy. In 468 (64,9%) procedures fibroids removal was possible from one myotomic incision, from 2 incisions in 16,6% cases, from 3 incisions fibroids were removed in 8,6% cases. Surgical results show one major complication. It is uterine rupture at 36 week gestation in patient who underwent transcervical myomectomy and prior to hysteroscopy uterus perforation.

We collect data from 352 (48,8% of all cases) patients after myomectomy. Only 212 (60%) of patients wish to be concept. 74 (34,9%) spontaneously and 27 (12,7%) pregnancies by IVF were detected. 99 childbirth (46,7%) and 35 (16,5%) first trimester miscarriages were observed.

Conclusions

Myomectomy in symptomatic myoma is a safety procedure with low rate of complications. Rate of conception in patients with infertility after myomectomy is 47,6%.

Laparoscopy and Pregnancy

Prevalence of uterine and ovarian abnormalities in early pregnancy

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Background

Prevalence of uterine and ovarian abnormalities in non-pregnant women is well established. Prevalence of these abnormalities in pregnancy and their impact on early pregnancy outcomes is unclear. The aim of this study was to examine the prevalence of uterine and ovarian abnormalities in early pregnancy.

Methods

This was a prospective observational study at The Early Pregnancy Unit, University College London Hospital. Women attending the unit between April 2017 and January 2018 underwent structured ultrasound examination by a single operator. This involved detailed examination of the pregnancy location and viability. We also carried out systematic evaluation of the uterus and ovaries and recorded the presence of any abnormalities.

Results

774 consecutive women were included. 46/774 (6%, 95% CI 4.3-7.7) had abdominal ultrasound scans and were excluded from analysis. We compared prevalence of uterine and ovarian abnormalities in these women with known prevalence data in non-pregnant women (n=985).

512/728 (70%, 95% CI 66.7-73.3) women had no abnormality compared to 21% in non-pregnant women ($p < 0.0001$). There was a significant difference in the proportion of women diagnosed with fibroids in pregnant and non-pregnant women [106/728 (15%, 95% CI 12.4-17.6) vs. (35%, 95% CI 32.0-38.0) $p = < 0.0001$]. There was a significant difference in the proportions of women diagnosed with ovarian tumours [31/728 (4%, 95% CI 2.6 – 5.4) pregnant vs. (10%, 95% CI 8.1 - 11.9) non-pregnant ($p < 0.0001$)].

However, the prevalence of both endometriosis [28/728 (4%, 95% CI 2.6 - 5.4) vs. (6%, 95% CI 4.5 - 7.5) $p = 0.0642$] and major uterine anomalies [(13/728 (2%, 95% CI 1.0 – 3.0) vs. (8/985 (0.8%, 95% CI 0.24 – 1.36) $p = 0.031$)] was similar. 9/28 (32%, 95% CI 14.7-49.3) women with an ultrasound diagnosis of endometriosis during pregnancy had evidence of decidualised lesions.

Conclusions

Fibroids and ovarian tumours were less prevalent in women attending for early pregnancy care than non-pregnant women. However, the prevalence of endometriosis was similar. This may suggest that the impact of endometriosis on fertility is less severe than previously thought. Knowledge regarding the prevalence of gynaecological conditions and their impact on pregnancy will help counsel women appropriately about specific risks to pregnancy and plan suitable follow up care.

Laparoscopy and Pregnancy

Petersen's hernia during pregnancy after gastric bypass surgery: case series

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Background

Obesity is an increasing pathology in women of reproductive age. Parallel to diet, the first surgical procedure performed is the gastric bypass.

However, despite its effectiveness in term of weight loss, it is associated with short and long-term side effects such as nutritional deficiency and small bowel obstruction due to internal hernia in the Petersen space among others. The latter can lead to bowel strangulation and gangrene and possible fatal maternal and fetal complications.

Methods

Six cases of Petersen's hernia in pregnant women that had previously undergone a laparoscopic gastric bypass surgery between 2010 and 2017 were included. Retrospective data concerning the symptoms, body mass index (BMI) before and after surgery, the procedure, the gestational age, the interval between the bariatric surgery and the pregnancy as well as the delivery mode were collated and the maternal and fetal outcomes analyzed.

Results

Mean BMI before the bariatric surgery was 41,18 kg/m² (36-44,4). Mean importance of weight loss for 4 patients was 39,25 kg (±35–45 kg). Mean time interval following bariatric surgery and the development of the hernia was 6 years (3-10). Procedures were performed at a mean gestational age of 30 weeks of amenorrhea (22-38). All six patients presented acute abdominal pain, mainly epigastric; four patients complained also of nausea and vomiting. One patient presented melena and was hemodynamically unstable.

Five patients underwent an abdominal CT scan with results varying from an internal hernia (3 of them) to intestinal distension (6) associated with intraparietal intestinal hemorrhage (1).

The procedures were performed by laparoscopy for 4 patients and laparotomy for the 2 others.

Three women underwent a caesarean section (one because of uterine perforation at 33 weeks and one for fetal demise and for maternal rescue) while the three others had vaginal full-term delivery. No major postoperative complications were noted.

Conclusions

Discussion: Pregnant patients with an history of gastric bypass can present with internal hernias even late after their procedure, up to 10 years in our series.

Imaging can be performed but shouldn't delay the procedure, because of its low sensitivity (CT-scan for internal hernia was positive for only 3 patients). Moreover, the literature review shows that maternal death (9%) and fetal death (13.6%) rates are considerably higher when treatment delay increases.

Surgical exploration is feasible whatever the gestational age with unremarkable postoperative evolution. However, the technique must be tailored by the uterine and the condition of the patients. Likewise, the delivery will be dictated by obstetrical guidance.

Conclusion: The possibility of an internal hernia should always be considered in pregnant women with history of gastric bypass who present with abdominal pain, in order to prevent catastrophic outcomes such as maternal and/or fetal death.

Laparoscopy and Pregnancy

Design and validation of a training program in fetoscopy

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Background

Fetoscopy is a new surgical approach for intrauterine fetal procedures used for several different diseases, but also is a technique very complicated to perform so training courses to learn it are needed. We present our experience in the design and development of a unique novel training program in fetoscopy and updates on fetal surgery, and the determination of face validity by the attendants. There is not other training course using animal model for fetoscopy worldwide.

Methods

Data included in the present study was obtained from 8 consecutive editions of our Training Course on Fetoscopy and Updates of Fetal Surgery from 2012 to 2017. The course was accredited by the Ethical Committee of animal. Our training model, with a total duration of 16 hours, begins with acquisition of knowledge in fetoscopy task with theoretical session about different topics on fetal surgery. The second day is composed by a theoretical session about instrumental concepts and a demonstration in pregnant sheep model (90 days), after which the attendants undertook various surgical techniques hands-on animal model to test and enhance their skills. At the end of the training program, a subjective evaluation questionnaire was handed out to the attendants, in which different didactic and organizational aspects were considered.

Results

We obtained a highly positive score on all questions concerning the different topics and techniques included in the training program (≥ 9 points over 10). A 78,5% of the total 80 attendants were in accordance with the course total duration, whilst 21,5% considered that it should be of longer duration. Regarding abilities' self-assessment, 79,5% considered them capacitated to perform the trained procedures on live patients

Conclusions

The presented unique training model has obtained a very positive valuation score, leading to an increase in the attendants' self-confidence in the application of learned techniques to their clinical practice.

Chronic pelvic pain and pelvic nerves

Diagnostic laparoscopy in patients with pelvic pain - where to now?

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Background

This project represents the first arm in our quality improvement project addressing the management of pelvic pain. Our centre in Belfast has a majority of generalists and small number of specialists. Laparoscopy for the treatment of pelvic pain has well known limitations, and may be beset with issues including both false positive and false negative diagnoses. We sought to assess the diagnostic laparoscopies for pelvic pain within the unit for 1 year with the aim of evaluating the quality of management for those having both positive and negative findings.

Our aims;

- Identify demographics, and type of symptomatology and symptom duration in patients presenting with pelvic pain
- Identify any previous treatments used prior to laparoscopy
- Rate of positive and negative laparoscopy in our cohort
- Subsequent management of all patients.

Methods

All diagnostic laparoscopies were identified through a theatre data recording system within a 1 year period. The Electronic Care Record(ECR), an online system of patient information including demographics, and patient letters was used. Using ECR we identified those who had a diagnostic laparoscopy for pelvic pain.

Subsequent information on symptoms, surgical findings and subsequent treatments was identified from ECR.

Results

- 106 patients were identified.
 - 36.8% of the cohort had pure pelvic pain while the remainder of 63.2% had pelvic pain plus other symptoms including menorrhagia, dyspareunia etc.
 - 78.3% of our patients had pain >1year with 53% of the patients having pain for >2 years.
 - 58% had previous treatment such as hormonal pills(43.4%), mirena(11.3%) or Gonadotrophins(10.4) prior to laparoscopy.
 - Laparoscopy showed positive findings in 61.3%, 44%(point prevalence 0.44) had endometriosis. Laparoscopy was negative in 38.7%. The remaining patients had adhesions(11.4%), pelvic congestion(4.7%, fibroids/cysts(1.9%) or other conditions.
 - The majority of patients(56.5%) had no recognisable classification of their endometriosis. 45.6% had ablative techniques including laser or diathermy, 19.6% had excision, 15% had medical treatments post op and 17% were rescheduled for further surgery. Subsequent management was varied.
 - No major complications were noted in any patients.
 - Within the cohort where laparoscopy was apparently negative 58,5% were discharged at the time of surgery with no review. A further 9.8% were discharged at initial post surgical review.
 - Only 5.6% of all patients were referred to pain clinic.(7% of negative lap group, 6.5% ends group)
- No referrals to psychology or other multidisciplinary services were noted.

Conclusions

Our results show a concerning trend in the management of pelvic pain within our unit. The services of the multidisciplinary team including psychology and pain services appear underused in both patients with diagnosed endometriosis and those with a negative laparoscopy. In particular the majority of patients with a negative laparoscopy do not receive any further management. Of further concern there is no robust documentation or classification system for the recording of laparoscopy findings.

Chronic pelvic pain and pelvic nerves

Laparoscopic management of a pelvic inflammatory myofibroblastic tumor

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Background

Inflammatory myofibroblastic tumor is a rare benign lesion with a controversial etiology that often mimics malignant neoplasm. Inflammatory myofibroblastic tumor commonly arise from myofibroblastic spindle cells and may present in various tissues and organs causing a great variability of clinical manifestations. Such tumor may recur and become locally invasive or metastasize. Due to its invasive nature surgical excision is recommended.

Methods

A 42 years old female presented with a 2 years history of chronic back and right leg pain. Magnetic resonance scan revealed a 2 cm size tumor localized in the right psoas major muscle 3 cm caudally from common iliac artery bifurcation. Subsequent ultrasonography showed the mass most likely to be a Schwannoma tumor. A complete laparoscopic excision of the mass with local lymphadenectomy was performed to ensure optimal treatment because of the possibility of malignancy.

Results

Histological examination showed a completely resected benign inflammatory myofibroblastic neoplasm with 25% chances of recurrence. After the operation right leg paresis and femoral nerve neuropathy occurred. The patient underwent physical rehabilitation which led to fully restored leg function. One year after the surgery no signs of tumor recurrence observed.

Conclusions

Laparoscopy is a minimally invasive option for approaching inflammatory myofibroblastic tumors and might offer the advantage of better visualization, especially in narrow anatomic spaces. Treatment must be planned by a multidisciplinary team with a highly qualified radiologist that could guide surgeons during the operation

<https://player.vimeo.com/video/272510774?autoplay=1>

Chronic pelvic pain and pelvic nerves

Excision of an unexpected retroperitoneal pelvic mass found at laparoscopy

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Background

A Fifty Four-year-old female patient was referred to the gynaecology clinic with a history of intermittent vaginal discharge over 12 months and three episodes of vaginal bleeding over four months. She also had pelvic discomfort and backache for a long time. In her past medical history, she had a total abdominal hysterectomy and right salpingo-oophorectomy at the age of 27 for endometriosis. Apart from that she was fit and healthy and has two children born by normal vaginal delivery. On vaginal examination, a solid, round, regular, mobile mass was felt lateral to the left vaginal wall, measuring approximately 6 cm. This was clinically felt to be not ovarian in origin as it was too low in the pelvis. Speculum examination showed a bulge in the left vaginal wall. A trans-vaginal and an MRI scan suggested a six cm left dermoid cyst most likely originating from the left ovary. Tumor markers were normal. The patient was listed for laparoscopic left Salpingo-oophorectomy.

Methods

In view of the deep pelvic mass, a cystoscopy was performed and a left ureteric stent was inserted at the start of the operation. The findings at laparoscopy were omental adhesions covering the left pelvic sidewall. After adhesiolysis, the left fallopian tube and ovary were normal and a retroperitoneal mass was seen and felt deep in the left side of the pelvis. A rectal examination and a vaginal probe were used to identify safe borders of the mass. The left ureteric stent was easily felt at the lateral border of the mass. A vertical incision on the peritoneum was done and the mass was removed with counter vaginal pressure. It appeared yellow and thought to be a Lipoma. This was removed with the left ovary in an endocatch bag.

Results

The Patient had an uneventful recovery and was discharged the following day. Initial histology of the mass raised the possibility of an adipose or neural lesion most likely representing a myxoid change in a neurofibroma.

Conclusions

Retroperitoneal masses are commonly misdiagnosed to be ovarian or uterine in origin. This is because retroperitoneal tumors are relatively rare compared to ovarian and uterine tumors. There are several case reports of retroperitoneal masses misdiagnosed to be gynaecological in origin (Smart OC, et al, Foshager MC, et al). Retroperitoneal tumors can be solid, cystic, vascular, myxoid, calcified and fatty lesions. MRI imaging permits better characterization and localization of tumors. (Alampady K, et al). Clinical examination findings have a vital role in the management and should always be used in conjunction with imaging modalities. In this case, my clinical findings were highly suspicious that the mass was not ovarian in origin and allowed safe surgical planning.

BEST SELECTED POSTER (40) AND POSTER PRESENTATIONS (85)

ES27-0052 - P*002

Selected Posters

Factors related to delay in diagnosis of deeply infiltrating endometriosis

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Background

Delay of Diagnosis is one of the most typical clinical features of endometriosis. Whether deeply infiltrating endometriosis (D.I.E.), which is the most severe type of endometriosis, share different characteristics with ovarian endometrioma (OMA), is not clear yet. In this study, we aim to investigate factors associated with the delay in diagnosis of D.I.E..

Methods

From January,2013 to September, 2017, patients diagnosed with D.I.E. and treated with laparoscopic surgeries by a multidisciplinary surgical team in Obstetrics and Gynecology Hospital of Fudan University were enrolled. By comparison, patients with OMA and treated by the same surgical team were set up as control. Medical record was retrospectively analyzed. All that information was double-checked by telephone interview. For statistics, t-test, U-test, Chi-test or Fisher exact calculation was employed accordingly. A logistic model was employed and by "stepwise" method, factors were evaluated in this model. It is reckoned as statistically significant when $P < 0.05$.

Results

A total of 71 patients with D.I.E. were identified, and 128 patients with OMA were included as control. The mean duration of disease (month) in D.I.E. patients were significantly longer than that in OMA patients (71.27 ± 18.19 vs 37.87 ± 3.90 , $P = 0.011$). Furthermore, "mean time from symptom onset to first consultation" in D.I.E. were significantly longer than that in OMA (29.14 ± 6.10 vs 15.80 ± 2.78 , $P < 0.001$). Via multivariate analysis, the following factors were found to be associated with delay of diagnosis (months) in D.I.E.: Symptom onset age < 18 years old (178.91 ± 25.35 vs 19.00 ± 7.63 , $P < 0.01$), and those experienced adolescent dysmenorrhea (160.80 ± 32.01 vs 48.25 ± 6.29 , $P < 0.01$), or patients whose chief complaint was dysmenorrhea (82.84 ± 11.85 vs 33.56 ± 7.49 , $P < 0.01$). Moreover, patients who paid first visit to secondary hospitals or even inferior medical institutions possessed a longer "mean time from first consultation to diagnosis", patients' first consultation in non-gynecologic (GYN) clinic, and patients who lived other than Shanghai, had a longer total duration of disease than Shanghai-dwelled D.I.E. patients (78.26 ± 14.21 vs 50.33 ± 8.54 , $P = 0.0266$).

Conclusions

The delay of diagnosis in D.I.E. is more severe than in OMA. And the major difference may exist at "time from symptom onset to first consultation". Better education in both general population and medical professionals may promote early diagnosis of D.I.E.. Choosing tertiary hospitals may get more prompt diagnosis and treatment for patients with D.I.E.. Prospective studies should be conducted in the near future to improve the credibility of this project.

Extraperitoneal laparoscopic paraaortic lymphadenectomy to staging gynaecologic cancer. Surgical technique step by step and outcomes

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Background

One of the major difficulties in surgery in the retroperitoneal space is the invasion of the bowel into the operative field. Extraperitoneal approach which has a number of advantages, including a good operative field as the peritoneum acts as a natural retractor.

A descriptive retrospective study was made. Analysis of surgical technique and outcomes in 34 cases of staging surgery with extraperitoneal laparoscopic paraaortic lymphadenectomy (ELPAL) were made in last five years for gynecologic cancers. Previous diagnoses were: 20 cases for endometrial cancer, 9 cases for cervical cancer and 4 cases for ovarian cancer and 1 case for sarcoma. In all of cases, additional staging surgical processes were made.

Methods

We present in a video format a extraperitoneal laparoscopic paraaortic lymphadenectomy, step by step. Surgical technique is described: The gonadal vessels and the junction of the left ureter are identified above the common iliac artery, and the left lateral wall of the aorta is followed in cranial direction by performing the excision of the lateral lymph drainage chain in block from the aortic bifurcation to the left renal vein. To remove the aorto-cava lymph nodes on its anterior surface, the origin of the inferior mesenteric artery is exposed and progressively released to the left renal vein. In the right side, the lymph nodes that are laterally vena cava, are resected. The procedure ends with the extraction of the nodal chains through the initial incision by in endobag, checking the correct hemostasis and lymphostasis by bipolar coagulation.

Results

Mean age was 54,2 years. Mean body mass index was 28,1 kg/m². Operating time was 270,8 minutes, all procedures have been included. Mean blood loss was 756,2 ml, and 3 patients blood transfusion was necessary. Mean postoperative hospital stay was 4,4 days. One subcutaneous emphysema and one repair port site hernia, complications referred for the technique was reported. Mean removed nodes by laparoscopy was 18,6 nodes (7-44), in 6 cases were positive nodes.

Conclusions

This procedure is focused on the barrier-free nature of working in the retroperitoneal space and has been developed to make oncologic surgery less invasive. Proper evaluation of the women, supported by surgical skills and good knowledge of the technology and instrumentation is the keystone to safe access and prevention of complications during ELPAL staging surgery.

The study about the usefulness of the retroperitoneal suture in TLH

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Background

In total laparoscopic hysterectomy (TLH), it is said that the risk of postoperative complication of the vaginal stump is higher than that of total laparotomy. Fortunately, in our department, we have not encountered cases undergoing reoperation associated with vaginal stump disruption, but cases occasionally require postoperative infection and require additional treatment. Based on these experiences, when performing TLH, the procedure was changed to add retroperitoneal suture in addition to conventional vaginal stump treatment from February 2016. And we examined the prevention effect of postoperative infection before and after that.

Methods

From January 2015 to December 2016 we conducted 435 TLHs in our department. Among them, we analyzed 252 patients who excluded endometriosis (adenomyosis· ovarian chocolate cyst). We have closed the vaginal fracture by single ligation, and adhesion inhibitor was attached to the peritoneal defect. We divided the vaginal incision end into a group that closed the retroperitoneum by continuous suturing (suture group) and a group that did not perform closure suture of the retroperitoneum (non-suture group). And we analyzed relationships with postoperative CRP values between the 2 groups.

Results

Among 252 patients, the retroperitoneal suture was performed in 126 patients. Operation time, blood loss, sample weights were not significantly different between the two groups. There was no difference between the CRP value on the first day after surgery in the suture group and the non-suture group (1.3 ± 0.8 vs 1.3 ± 0.9) and the CRP value on the third day after surgery (1.9 ± 1.4 vs 1.9 ± 1.6). The CRP value after discharge (0.2 ± 0.7 vs 0.7 ± 2.4) tended to be higher in the non-suture group. In the non-suture group, 24 patients in 126 patients (19.0%) required additional treatment with antibiotics, 5 of whom (4.0%) were re-hospitalized. In contrast, in the suture group, 17 (13.5%) additional treatment of antibiotics and 3 (2.4%) were re-hospitalized.

Conclusions

Retroperitoneal suture in TLH was considered useful for preventing infection after surgery.

Routine prophylactic appendectomy in deep infiltrating endometriosis: single center 7 years experience

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Background

Deep infiltrating endometriosis is a frequent pathology touching around 10% of young women in reproductive age. One of its most usual symptoms is chronic pelvic pain that can sometimes be difficult to distinguish from other causes of abdominal pain. Moreover, the pathology itself is at the origin of adhesions and frozen abdomens that can get surgical emergencies very difficult to deal with.

Methods

Because of this condition of endometriosis being a confusing factor in patients with abdominal pain, the risk of delay of pathologies such as appendicitis or the difficulty to reoperate this patients due to frequent adhesions we decided to establish the performance of routine appendectomy, regardless of the macroscopic appearance, in every surgery of deep infiltrating endometriosis that was performed in our centre. From a total of 107 appendectomies performed between 2010 and 2017: 53 were found normal, 42 presented endometriosis, 8 involution, 3 carcinoid and 1 lymphoid hyperplasia.

Results

The data showed that less than 50% of the specimens turned out to be normal.

Conclusions

Taking into consideration the low surgical risk of adding this procedure to the deep infiltrating endometriosis surgery and the likelihood of micro and macro unexpected findings, we find advisable to pursue with the recommendation of routine prophylactic appendectomy.

TLH 54% vs 6% UK average - how we did it

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Background

Many units do not routinely offer TLH because of the alleged higher cost of procedure and/or the lack of surgeon skills. Current evidence suggests that TLH is a safe and cost-effective alternative to TAH due to its benefits of reduced intra-operative blood loss, less post operative pain, reduced hospital stay and quicker patient recovery. The aim of this study was to compare mode of surgery, indication, complications, post operative recovery and cost effectiveness of TAH vs TLH in NHS Lanarkshire.

Methods

A retrospective case note review of TAH and TLH was performed. In our unit, 216 cases of total hysterectomy were performed from January 2017 to January 2018. This was further divided into 99 TAH cases and 117 TLH cases. Mode of surgery, indications, surgeon, complications, post operative recovery and cost effectiveness of TAH vs TLH were analysed.

Results

Mode of hysterectomy, 54% TLH vs 46% TAH. 11 out of 13 Consultants at NHS Lanarkshire are proficient and regularly performing TLH, 84.6%. The operation time for TAH was 70 minutes, compared to TLH 110 minutes. Hospital stay post TAH was 3.7 days at a cost of £1798.2 (3.7 x £486). TLH hospital stay was reduced to 1.2 days £729 (1.5 x £486). Overall cost for TAH was £2213.80, compared to TLH £1492.80

Conclusions

In the UK, 56976 hysterectomies were performed in 2012; 62% total abdominal hysterectomy , 32% vaginal hysterectomy and 6% laparoscopic hysterectomy. With 84.6% of Consultants appropriately trained to perform TLH, this has allowed for a significant increase in the number of TLH performed within NHS Lanarkshire compared to UK average, 54% vs 6%. Whilst TLH is more costly intra operatively, it is significantly less costly post operatively owing to quicker recovery and post operative hospital stay. Our study demonstrates that TLH is a safe and cost-effective alternative to abdominal hysterectomy, and where feasible should be offered routinely to appropriate patients .

Effect of endometriosis surgery on symptoms and quality of life

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Background

To evaluate the outcomes of patients undergoing surgery for endometriosis in a BSGE endometriosis centre.

Methods

Patients completed EQ5D and EQVAS questionnaires prior to surgery which assessed their quality of life. They also completed questionnaires which assessed the frequency of their bowel symptoms and rated their various types of pain on a scale of severity from zero to ten. The same questionnaires were completed 6 months after surgery and the results were compared.

Results

16 patients were included; 100% had para-rectal dissection, 75% had excision of a recto-vaginal nodule, 75% had ureterolysis, 75% had an oophorectomy or excision of an endometrioma, 44% had some form of bowel surgery, 12.5% had excision of a ureteric nodule and 12.5% had a hysterectomy.

At 6 months post surgery there was, on average, a reduction in the severity of pre-menstrual pain, menstrual pain, non cyclical pain, dyspareunia, dyschezia and lower back pain. However the severity of bladder pain and difficulty passing urine increased, due to 5 patients reporting new onset symptoms since surgery. One patient had bladder symptoms prior to surgery which had improved 6 months post operatively. Of the patients that had bowel symptoms prior to surgery, 42% had less constipation, 31% had less urgency, 25% had less frequency, 20% had less sensation of incomplete bowel emptying and 13% had less episodes of blood in their stool by 6 months post surgery.

There was an improvement in quality of life in all measured domains. Prior to surgery, on average, patients rated their quality of life 64/100 compared to 78/100 6 months post surgery. There have been no reported complications for these 16 patients so far, with all patients being managed with laparoscopic surgery bar one who required conversion to laparotomy.

Conclusions

There is improvement in symptoms and quality of life for patients following laparoscopic excisional surgery for endometriosis, with low rates of peri-operative and post-operative complications. Further work would include following up these patients for a longer period to see if the benefits of surgery continue in the long term.

Acute abdomen caused by corpus luteum cysts in early pregnancy: description of the corpus luteum preserving laparoscopic technique

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Background

Acute abdomen and hemoperitoneum following corpus luteum (CL) or CL cyst (CLC) rupture are common in non-pregnant women. If surgical treatment is required, a laparoscopic hemostasis on CL/CLC is usually simple and effective. Beyond pregnancy, a CL impairment following conventional hemostatic maneuvers (e.g. diathermy) has little clinical relevance. In contrast, in early pregnancy the preservation of CL is crucial, because CL is the indispensable source of progesterone before the luteo-placental shift.

Methods

With the use of intraoperative photos, we demonstrate how atraumatic hemostasis on the CL, resulting in full preservation of its function, can be achieved by use of modern hemostatics (here: hemostatic gelatin-thrombin matrix [HM], Floseal®, Baxter Inc.).

Results

Following evacuation of hemoperitoneum, an effective hemostasis is achieved by the laparoscopic HM application. After 2 minutes, the surgical field is irrigated and the wound edges are approximated with a compression-free, quick absorbable suture. Our first presented patient (33 y.o. G2P1, 6+1 weeks of gestation [gw]) was treated laparoscopically using this technique due to massive hemoperitoneum (1 liter) after large (7cm) CLC rupture. The following pregnancy course and the spontaneous term delivery were uneventful. The second patient (31 y.o. G3P1, 5+6 gw) underwent a laparoscopy due to acute abdomen resulting from a non-ruptured, acute symptomatic CLC. After evacuation of the cystic part of CL, the solid CL part was preserved and atraumatic hemostasis was achieved once again in the above described manner. Despite not receiving the recommended gestagen substitution, her pregnancy course was also uneventful, confirming the full preservation of the CL function after surgery, and spontaneous delivery occurred at term. In both cases, the histological biopsies confirmed the diagnosis of the CL as the bleeding source.

Conclusions

Especially in early pregnancy, an atraumatic, CL-preserving hemostasis using HM is a considerable alternative to the traditional, tissue-traumatizing hemostatic maneuvers.

Pregnancy rates after laparoscopic treatment of minimal or mild endometriosis

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Background

Minimal and moderate pelvic endometriosis is frequently diagnosed in infertile women. Ablation of the endometriosis lesions often improves fertility potential by 50-70%. A retrospective evaluation of the pregnancy rate (PR) of infertile women diagnosed and treated by laparoscopy for endometriosis is presented.

Methods

January 2012 to July 2017, 704 infertile women, age 21 to 41, with excluded male factor, underwent laparoscopy and methylene blue dye test evaluating tubal patency and staged for minimal or moderate endometriosis according to rASRM classification. Women with minimal endometriosis were treated by ablation of the visible lesions using bipolar diathermy. Patients with moderate disease underwent excision of the endometriosis implants using scissors and bipolar probe for haemostasis. The PR and time from surgery to spontaneous conception was evaluated.

Results

Among 704 laparoscopies performed, 337 (48%) of minimal or moderate endometriosis were diagnosed and confirmed by histopathological biopsies. Bipolar ablation of the endometriotic lesions was performed in 220 cases while in 87 patients excision of the endometriosis implants was necessary. Concomitant pathologies were noted, 22.3% had fibroids, 10.5% endometrial polyps, 10,1% adhesions. Subtle lesions like Morgani tubal cysts were found in 45.2% and cervical polyps in 12.5% of the cases. Among all patients with confirmed patent tubes 69/202 (34%) treated for minimal endometriosis and 53/114 (45%) with moderate disease had a spontaneous pregnancy within 40 weeks after operation. The overall PR after spontaneous conception up to 12 months post operatively was (69/220) 34.2% for the minimal endometriosis treated by ablation, and (53/117) 45.3% for the moderate disease, endometriosis implants treated by excision.

Conclusions

The significant difference in PR, after spontaneous conception, between the 2 treatment groups, probably reflects the difficulty to occasionally distinguish between minimal and moderate endometriosis and consequently under treatment of the disease.

Prospective randomized trial comparing the impact of two different intraoperative CO₂-pressure levels (10 und 15 mm Hg) during laparoscopic hysterectomy due to benign uterine pathologies

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Background

This trial aimed at comparing two different two intraoperative CO₂-pressure levels (10 und 15 mm Hg) during laparoscopic hysterectomy due to benign uterine pathologies in terms of postoperative pain levels, use of pain medication and postoperative increase of arterial CO₂ (pCO₂).

Methods

In this prospective randomized controlled study we included all patients which underwent laparoscopic hysterectomy due to benign uterine pathologies between 03/2015 and 06/2016 at the department of Gynecology & Obstetrics, Homburg University Hospital. Patients were randomized to the standard pressure group (intraoperative CO₂ pressure 15 mmHg) or to the low pressure group (intraoperative CO₂ pressure 10 mmHg). Surgical parameters, peri – and postoperative complications, postoperative pain levels after 3, 24 and 48 hours, measured via a visual analogue scala (VAS), postoperative piritramid requirement (mg) and length of postoperative stay (days) were recorded.

Results

Eight of the included 139 patients had to be excluded due to incomplete pain questionnaires, leaving 131 patients for the final analysis. Compared the standard pressure group, patients in the low pressure group showed significantly lower pain scores after 3 hours (VAS 2.16 ± 2.07 vs. 3.51 ± 2.37) and 24 hours (2.47 ± 1.8 vs. 4.76 ± 2.25; p < 0.05). Regarding piritramid requirement we observed significantly lower values in the low pressure group (3.67 ± 5.49) compared to the standard pressure group (4.88 ± 5.57; p < 0.05). There was no differences between intra – and postoperative complications between the two groups.

Conclusions

In this prospective randomized trial we observed a significant reduction in postoperative pain scores and postoperative pain medication requirements in patients treated with low pressure laparoscopy. Low pressure laparoscopy seems to be an effective and safe technique for reduction of postoperative pain levels following laparoscopic hysterectomy.

Clinical observation of obturator nerve injury after pelvic lymphadenectomy for gynecological malignancies and preliminary evaluation of the effect of GM-1

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Background

To observe the related factors of obturator nerve injury after pelvic lymphadenectomy in gynecological malignancies and to do the preliminary evaluation of monosialoglycans ganglioside (GM1) on the repairment of obturator nerve injury.

Methods

The related complications of 652 cases of gynecological malignancies were observed from April 2015 to December 2016 in our hospital. The related clinical data of 652 patients were analyzed statistically, to study the related factors of obturator nerve injury. 74 cases of gynecologic malignant patients with obturator nerve injury, were randomly divided into observation group (34 cases) and control group (40 cases), who had undergone gynecological surgery, including pelvic lymph nodes resection. The observation group was given routine therapy together with ShenJie (GM1) intravenous drip, and the control group was given routine therapy only. The recovery of obturator nerve injury symptoms between two groups were recorded and analyzed as well.

Results

The single factor analysis of obturator nerve injury indicated that the surgery of cervical cancer and endometrial cancer, laparoscopy, the number of dissected pelvic lymph nodes, the amount of intraoperative bleeding, had a close correlation with obturator nerve injury ($P < 0.05$). Multivariate analysis of obturator nerve injury indicated the number of surgical procedures (laparotomy, laparoscopic), intraoperative blood loss, pelvic lymph node dissection and obturator injury ($P < 0.05$), were the independent risk factors for obturator nerve injury. The pain and numbness in GM - 1 treatment group was significantly better than the control group, and the difference was statistically significant ($P < 0.05$).

Conclusions

The incidence of obturator nerve injury is higher in cervical and endometrial cancer surgery than in ovarian cancer, in laparoscopy than in abdominal surgery. The more dissected pelvic lymph nodes, the more intraoperative blood lose, the easier to get obturator nerve injury. Monosialoglycans ganglioside (GM1) promote the recovery of obturator nerve injury after pelvic lymph node dissection in the gynecological malignant tumor.

The role of oil oral administration in displaying the chylous tubes and preventing chylous leakage in laparoscopic para-aortic lymphadenectomy

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Background

To investigate the possibility of oil oral administration in displaying chylous tubes and preventing chylous leakage in laparoscopic para-aortic lymphadenectomy.

Methods

This is a retrospective study. From January 2017 to May 2018, 30 patients with gynecological tumors in the Obstetrics and Gynecology Hospital of Fudan University underwent laparoscopic para-aortic lymphadenectomy. Ten patients underwent laparoscopic para-aortic lymphadenectomy with oil oral administration, 20 patients with similar clinical characteristics underwent the procedure without oil oral administration.

The perioperative data, the rate successful display of the chylous tubes, and the incidence of chylous leakage of the two groups were compared.

Results

The para-aortic lymphadenectomy operating time of the oil oral administration group was comparable with that of the control group (60.33±3.1 minutes vs 71.67±5.3 minutes, P=0.000). In the group with oil oral administration, successful display of the chylous tubes was observed in all the patients. While in the other groups, the chylous tubes were displayed in none of the patients. The occurrence of chylous leakage was 0 and 55%(11/20) in the group with or without oil administration. The postoperative drainage duration of the oil oral administration group is lower than that of the control group (5.4±1.2d vs 11.1±3.0d, P=0.000) and the somatostatin application time of the oil oral administration group is lower than that of the control group (0 d vs 3.56±0.8 d). The post hospital stay was shorter in the oil administration group than that in the control group (12±4.1d vs 16±3.9d, P=0.038), however, the difference was not significant. While the operation cost of the oil oral administration group is similar to the control group (1419±89.2dollars vs 1469.57±128.8 dollars, P=0.347), the total cost of the oil oral administration group is lower than the control group (4955.67±304.4dollars vs 6491.12±1782.6 dollars, P=0.021). [Table1] Table 1. Perioperative data of the two groups.

Parameter, mean ±SD or n (range)	Oil Oral Administration group (n=10)	Control group (n=20)	p value
Para-aortic lymphadenectomy operating time (min)	60.33±3.1	71.67±5.3	0.000
Chylous leakage occurred (%)	0/10	11/20	0.003
Estimated blood loss (mL)	164.4±106.5	214.8±204.4	0.276
Hemoglobin change (g/dL)	15.0±10.4	19.9±15.1	0.199
Number of lymph nodes excised (n)	18±6	15±5	0.058
Lymph node metastasis (%)	3/10	5/20	0.771
Postoperative drainage duration (d)	5.4±1.2	11.1±3.0	0.000

Fasting time (d)	1.56±0.7	3.89±1.1	0.000
Somatostatin application time (d)	0	3.56±0.8	0.000
Hospital stay postsurgery (d)	12±4.1	16±3.9	0.038
Total cost, US \$	4955.67±304.4	6491.12±1782.6	0.021
Operation cost, US \$	1419±89.2	1469.57±128.8	0.347
Other cost, US \$	3536.67±307.5	5021.56±1716.1	0.021

Abbreviations: SD, standard deviation **Conclusions**

Oral administration of oil before operation is a feasible and effective method to display the chylous tubes and to prevent the chylous leakage, which can be used as a routine method to prevent the chylous leakage on the night before para-aortic lymphadenectomy.

Myomectomy for cervical fibroids: a systematic review

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Background

Cervical fibroids are rare and associated with dysfunctional uterine bleeding and subfertility. In women who wish to preserve their fertility, the only management available is myomectomy. Regardless of approach, there exist unique operative challenges due to restricted surgical access, the proximity of vital structures within the operative space and the lack of myometrium left to reconstruct the cervix. Surgeons now utilise a variety of techniques to reduce surgical morbidity, the merits of which remain unclear, providing no consensus for best practice. Furthermore, the reproductive benefits of cervical myomectomy are unknown.

In this study, we aimed to systematically review the strategies and techniques employed in myomectomy for cervical fibroids.

Methods

A systematic review using terms specific to myomectomy and cervical fibroids was undertaken using the search engines MEDLINE and EMBASE until May 2018. Case reports, conference abstracts and non-English texts were excluded. The following outcomes were extracted: age, indication, preoperative imaging, fibroid size, preoperative medication, approach (vaginal/laparoscopic/abdominal), intraoperative techniques, weight of fibroid(s), estimated blood loss (EBL), complications and reproductive/symptomatic outcomes.

Results

Of the 396 articles identified, five observational studies (2006-2016), including one controlled study, matched the strict inclusion criteria, identifying 75 patients who underwent myomectomy for cervical fibroids. Sample sizes varied from 5 to 28 patients. 3/5 studies used MRI and 2/5 studies used ultrasound for pre-operative fibroid mapping in order to determine surgical approach. Where specified, the average maximum diameter of fibroid ranged from 5.8 to 7.6cm. A laparoscopic approach was employed in 4/5 studies with one study using laparotomy.

Measures to reduce fibroid volume and EBL included preoperative gonadotrophin-releasing hormone in 4/5 studies. Perioperative manoeuvres to reduce bleeding included the use of intraoperative uterine vasopressin (4/5), internal iliac artery balloon occlusion catheter (1/5) and uterine artery ligation (3/5). The one controlled study investigating the latter technique reported a reduction in the EBL/fibroid weight ratio by over half. The mean weight of fibroids varied across studies from 80-1850g.

Only two complications were reported in the 75 cases; one laparoscopy was converted to laparotomy due to haemorrhage and there was one case of postoperative retroperitoneal haematoma. Clinical outcomes were inconsistently and poorly reported at follow-up. There were only four pregnancies, all of which were delivered by Caesarean section, across all the included studies.

Conclusions

There is no agreed practice for managing cervical fibroids. Data were obtained from a few, small, mostly uncontrolled, observational series. There was considerable heterogeneity in study size, presentation, type and number of fibroids, management and outcomes.

A registry should be established to collect data on interventions and outcomes including morbidity and reproductive performance. Such data should direct specific, multi-centre research studies evaluating specific interventions within defined populations.

The significance of fallopian tubes, subtle lesions and length and infertility

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Background

The magnitude of how the fallopian tubes subtle lesions affect fertility is unknown. The purpose of this study was to determine the significance of fallopian tubes, subtle lesions and length and infertility.

Methods

In this prospective observational study, the first 100 cases that admitted in our hospital were evaluated. During laparoscopy the length of the fallopian tubes, the uterine dimensions like bi-isthmus distance and fundal to cervico-uterine junction distance as well as tubal subtle lesions were evaluated.

Results

The prevalence of subtle lesions among our cases was 54%; including bilateral and unilateral lesions. The lengths of the tubes ranged between 5 and 13 cm with a median of 10 cm. Seventy four patients were operated upon for infertility. The prevalence of subtle lesions among them was 55.4%. The percentage was 55% among the 20 cases with chronic pelvic pain. However, among the 6 cases admitted for recurrent miscarriage the prevalence was only 33%. The commonest subtle lesion was the hydatid cyst of Morgagni with a frequency of more than half of the lesions.

Conclusions

Subtle lesions of the fallopian tubes were found to be a common finding among patients operated upon for infertility and chronic pelvic pain; with no significant difference between these two indications. This finding was found in more than half of our patients. Management of these lesions could improve pregnancy rates in this particular group of women. Long follow-up for spontaneous pregnancy of these cases could probably prove the real significance of subtle lesions and their relation to infertility.

Design and evaluation of an advanced training program in laparoscopic gynaecological surgery

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Background

With this work we want to present our experience in the design and development of a training program in advanced laparoscopic surgery for gynaecologists, as well as the results of its face validity.

Methods

In a 2 days theoretical-practical course, a total of 69 participants contributed to this evaluation. Data included in the study have been obtained throughout 5 workshops held between 2016 and 2018. The courses have the Certificate of Scientific Quality awarded by the Spanish Society of Gynaecology and Obstetrics (SEGO). The courses consist of a practical session (15 hours) and a video-session (1 hour). Practical part involves hands-on box trainer tasks (3 hours) where attendants practice the basic dissection manoeuvres in organic tissue and hands-on live porcine model to carry out pelvic and para-aortic lymphadenectomy (12 hours). At the end of the course, students subjectively evaluate different topics such as the educational aspects and the organization of the training program by means of a questionnaire.

Results

The degree of satisfaction with regards to organization of the course was 8.6 points over 10. Around 95% of the attendants consider correct the distribution theory-practice. About 80% of them were in accordance with the total duration of the course while 20% considered that, it should be of longer duration. Regarding skills self-assessment, about 98% of the participants considered that they had improved much, but only the 69% considered themselves qualified to perform trained procedures on patients.

Conclusions

our training program for Advanced Laparoscopic Gynaecology is very well accepted and has showed a high level of satisfaction. It allows participants to gain knowledge and improve skills, thus providing confidence to the application of learned techniques in the clinical practice.

Laparoscopic hysterectomy in obese patients – does overweight increase bad outcomes? A comparative study with normal weight population

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Background

Several studies have already shown that among women requiring pelvic surgery, obesity increases the degree of technical difficulty, morbidity and associated complications, including prolonged hospital stay, and increased risk of infection, venous thrombosis and anesthetic complications.

The aim of this study is to compare outcomes between overweight/obese and normal weight patients that underwent total laparoscopic hysterectomy (TLH) for benign conditions.

Methods

Retrospective analysis of a random sample of overweight/obese and normal weight patients who underwent TLH for benign conditions between January 2014 and December 2017. Patients' characteristics, operative data and post-operative outcomes were collected and statistically analysed using SPSS Statistic 22.0. Overweight/obesity is defined as having a body mass index of 25/30 or greater.

Results

A total of 164 patients were analysed, 95 obese (Group 1 – G1) and 69 normal weight patients (G2). There were no significant differences among groups in demographic characteristics, prior abdominal surgery or indications for surgery. The mean age was 48.7±7.5 [30-75] years in G1 and 47.8±4.9 [34-63] in G2. About 20% of woman in G1 were postmenopausal versus 11.6% on G2. The majority of women in both groups were multiparous (86.3% vs 81.2%). Regarding previous abdominal surgery, 51.6% of women in G1 underwent a previous surgery versus 39.1% in group 2. About 56% of women in the obese group were intervened for myomatous uterus against 66.7% in the normal weight women; other indications were endometrial pathology (36.8% vs 23.2%); anexial pathology (1.1% vs 2.9%); endometriosis (3.2% vs 4.3%) and cervical dysplasia (3.2% vs 2.9%).

There were no statistically significant differences between the two groups regarding the procedure time (mean 146.2±37.2 [50-230] minutes in G1 vs 146.6±33.9 [72-260] minutes G2; p=0.94), length of hospital stay (mean 3.5 vs 3.2 days; p=0.197), intraoperative (5.3% vs 1.4%; p=0.199) and early postoperative (≤ 6 weeks) complications (12.6% vs 14.5%; p=0.73) and estimated blood loss with transfusion requirement (7.4% vs 5.8%; p=0.69).

Conclusions

Minimally invasive hysterectomy appears to be safe in obese patients with no significant differences regarding outcomes as complications intra and postoperative, compared with normal weight women.

A simple in-house simulator-based Laparoscopic Suturing Practice Program (LapSUPP) for trainees in gynaecology

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Background

Simulation training in the enhancement of surgical skills has been proven to reduce errors and improve manual dexterities and is endorsed by the British Society of Gynaecological Endoscopy (BSGE). Surgical simulators include physical models, virtual reality computers and hybrids that combine the two. The evolution of these models inevitably incurs a cost which is often beyond the realm of affordability for many training gynaecology units. However, evidence shows similar results in skill improvement when comparing advanced simulator models with simple models facilitated by experienced trainers.

Laparoscopic suturing training courses are often expensive and are mostly aimed at senior trainees and consultants. However, the ability to develop laparoscopic suturing skills in junior surgical trainees has been proven through the combination of instructional videos and models. It is anticipated that this can be replicated in gynaecological surgical trainees. Our aim was to produce a simple, affordable training and assessment program in laparoscopic gynaecology suturing.

Methods

Eight **video-based** exercises have been developed, each emphasising a specific skill essential for the development of proper laparoscopic suturing technique, including assessment of hand-eye coordination; general economy and efficiency of movement; suture handling and knot-tying skills. The exercises also facilitate learning of specific procedures such as ovarian cystectomy and vaginal vault closure. Each of the exercises is ranked according to difficulty in order to assess progress.

Construction of **practice aids** (e.g. a synthetic vaginal vault made with sponge) were used in a simple box trainer device. Expired sutures were used and recycled for practice. Laparoscopic graspers and suture-holders were donated from the Gynaecology department. The course was provided for 20 obstetrics and gynaecology trainees in the region. The trainee was allowed a number of reasonable attempts (between 9 and 10) before the assessments were carried out. An experienced trainer would supervise the tasks, allocating them a judgement of 'working towards competence' or 'competent' in a formative setting.

Results

All participants showed improvement in their ability to perform the tasks at all levels of prior experience. Training assessment questionnaires were devised to gain feedback from both the trainees and the trainers assessing them. 100% of participants felt that it was a useful adjunct to clinical training; that if the model was available in their unit they would use it; and that it would be easily reproducible in their own units.

Conclusions

This course set up is inexpensive and effectively creates a non-intimidating environment of learning a complex surgical skill before transferring it into a real-life surgical situation. It has received excellent feedback from trainees and provides an important skill set for junior surgeons to build upon once they enter the operating theatre. It also affords the trainer the opportunity to improve his/her skills at teaching and mentoring those interested in laparoscopic surgery.

Laparoscopic approach of ovarian vein syndrome

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Background

Ovarian vein syndrome is a rare finding that can be treated with laparoscopic techniques

Methods

We present the case of a 36 years old patient with severe abdominal pain. Venography was performed and enlarged ovarian veins with significant blood reflux were found bilaterally.

Results

By using laparoscopic approach ovarian veins on both sides were dissected and clipped. The patient recovered well and showed significant improvement of abdominal pain

Conclusions

Ovarian vein has to be considered when no other cause of persistent abdominal pain is found. Venography can show the enlargement of ovarian vessels and blood reflux. The laparoscopic insertion of metallic clips at the level of the ovarian veins represent a minimal invasive solution for this disease.

Accuracy of ultrasound in diagnosing ectopic pregnancy

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Background

The early pregnancy assessment unit (EPAU) is a consultant led service, delivered by consultants and nurse sonographers. The unit sees approximately 6500 patients per year. The number of patients seen has increased in the last 2 years in response to NICE guidelines which have recommended a 7 day service.

One major complication of early pregnancy seen in the unit is ectopic pregnancy. Fatality rate for ectopic pregnancy has decreased over recent years, suggesting that earlier diagnosis and treatment may have made an impact (RCOG 2016).

The objective was to correlate ultrasound findings for patients with suspected ectopic pregnancies in EPAU with findings from subsequent laparoscopic surgery.

Methods

The data from 260 ectopic pregnancies that were confirmed by ultrasound over a 5 year period was analysed, of these approximately 53% had laparoscopic surgery. The remaining 47% had either conservative management with follow up blood results or medical management with methotrexate.

We analysed the data from the patients undergoing surgery to correlate the findings from ultrasound with the findings from laparoscopy.

Results

The positive predictive value for patients that had surgical management for ectopic pregnancy was 96%. Of these the positive predictive value for the site of the ectopic was 92%.

The negative predictive value for absence of fluid on ultrasound was 82% but the positive predictive value of identifying fluid on ultrasound and confirmed by laparoscopy was 67%.

Conclusions

For a unit of such a large size with a high positive predictive value for ectopic, the early and precise diagnosis of ectopic pregnancy is very high indicative of the quality of the operators. We are therefore comfortable in providing other options for patients such as medical management or conservative management.

We found a good correlation between ultrasound and laparoscopy for the size and location of the ectopic pregnancy however the presence of fluid on ultrasound did not always correlate with laparoscopic findings, meaning that the fluid was not always indicative of blood. A suggestion for future practice is to include comments of fluid echogenicity on ultrasound; however the absence of fluid gave us confidence in counselling patients for medical or conservative management.

Overall the findings confirm that the management of ectopic pregnancy based on ultrasound performed in a dedicated early pregnancy assessment unit by skilled sonographers has a positive influence on their management with a reduction in risk.

Comparison of total laparoscopic hysterectomy outcomes between attendings and residents

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Background

This study aims the comparison between outcomes of total laparoscopic hysterectomy (TLH) performed by resident vs attendings.

Methods

Retrospective review of all TLH performed during the years 2014 and 2017 in our gynaecological department. Two groups were created: group A - TLH performed by resident; group B - TLH performed by attending physician. Analysis was performed using IBM SPSS Statistics v.22, α -level = 0.05. Surgical outcomes of both groups were compared.

Results

A total of 80 patients underwent a TLH during this period, 13 of which were carried out in 2014 and 67 in 2017. A resident was the first surgeon in 28 of cases (35%) and 52 of the procedures (65%) were performed by an attending physician. There was no difference between groups' age (45.50 IQR 10 vs 49.50 IQR 18 years, $p=0.054$), body mass index (24.34 IQR 3.9 vs 26.31 IQR 7.5 kg/m², $p=0.090$) nor history of previous abdominal surgery ($p= 0.057$). Surgery indication (benign vs malignant disease) were different between groups ($p=0.00$). Of all THL, 22 (27.5%) were performed due to malignant pathology, of which only one was performed by a resident.

Additionally, there were no differences between groups regarding uterus' weight (139 g IQR 139 vs 106 IQR 86 g, $p = 0.74$). However, uterine median size differs significantly between the two groups ($p = 0.003$), with residents performing surgery in larger uterus (10 IQR 2 vs 8.5 IQR 3 cm) – benign pathology. Considering resident involvement as first surgeon, the median operative time was 152.5 IQR 55 vs 162.5 IQR 38 minutes ($p = 0.085$). Median postoperative hospital stay was the same in both groups (2 IQR 1 days [$p = 0.261$]), as well as the conversion rate and transfusion needs ($p \geq 0.05$).

In our study there was at least one complication during the surgical procedure in 3,8% of the cases, and in the postoperative period in 12.5% of cases. Comparing both groups, there were no statistically significant differences in the occurrence of those complications.

Conclusions

In our study the residents operated mainly benign pathology and larger uterus. Early and intensive laparoscopy training may be necessary to improve residents' laparoscopic skills. The resident involvement in laparoscopic hysterectomy does not result in negative effects on patient outcomes. This study shows no significant difference in the complication rate regarding resident vs specialist. Thus, it is important to encourage residents' active involvement in laparoscopic surgery, supervised and led by an expert laparoscopic surgeon. Moreover, since the complication rate is similar, it would be advantageous to allocate more malignant pathologies to residents.

How successful could be the methods and techniques for reduction of blood loss by laparoscopic myomectomy.

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Background

Laparoscopic myomectomy is common surgical procedure in gynaecology. We are interested to improve surgical outcome by reduction of blood loss during the procedure. Several methods and techniques to reduce a blood loss are currently available. However no united opinion is yet formed on the role of each of this method/technique.

Methods

We analyzed retrospectively 328 laparoscopic myomectomies, performed in our department in the time period 2011 - 2017. We compared different used methods and techniques for the reduction of the blood loss during the operation.

Results

The mean age of the patients was 37.4 years. In 32.9% of cases indication for the operation was a hypermenorrhoe. 81.1% of women submitted the desire for pregnancy in future. The mean blood loss during the operation was 194ml (+/-95ml). In 21% of cases were not used additional methods or techniques of reducing the blood loss. In 79% of cases were used 23 different combination of methods and techniques of reducing the blood loss (intravenous application of oxytocin; intravenous application of tranexamic acid; clipping of aa.uterinae; local application of homeostatic agents). The mostly used method for blood loss reduction was subcapsular application of local anesthetic. This local anesthetic alone was used in 47.3% of cases (n=155 patient).

Conclusions

We couldn't identify that one or another method/technique alone of reducing a blood lost during the laparoscopic myomectomy is better. The combination of different methods and techniques allows to reduce a blood loss statistically significant. The further studies are necessary to identify optimal combination of used methods and techniques for reduction a blood loss during laparoscopic myomectomy.

Functional and anatomical outcomes after creation of neovagina by laparoscopic Davydov procedure for patients with Mayer-Rokitansky-Kuster-Hauser syndrome .

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Background

Vaginal agenesis mostly occurs in patients with Mayer-Rokitansky-Kuster-Hauser (MRKH) syndrome. Creation of neovagina can give these patients possibility of having normal sexual life that way improving overall quality of life as well. Aim of this study is to evaluate our experience in creation of neovagina by laparoscopic Davydov procedure and to evaluate functional outcome for women who underwent this procedure.

Methods

Case control study where medical files of patients who underwent laparoscopic Davydov procedure in a private setting hospital from May of 2011 until December of 2017 were reviewed. Female Sexual Functional Index (FSFI) was evaluated in these patients and compared to 44 age-matched controls with normal vagina.

Results

Fifteen patients underwent creation of neovagina by laparoscopic Davydov procedure. Mean age of patients was 18,9 (16-23) years. Mean operating time was 93,7 (65-140) min. No perioperative and postoperative complications occurred. Mean vaginal length at six weeks was 8,53 (7-10) cm. Two patients who didn't have relationship with a possible sexual partner preoperatively and who wished to have a neovagina created, had difficulties maintaining self dilatation in first 6 postoperative weeks. Their treatment outcome failed afterwards. Answers to FSFI questionnaire were received from 9 (60%) MRKH patients. For MRKH patients who had a regular vaginal intercourse mean FSFI score was 27,01 and no statistical difference in total FSFI score was found if compared to controls. MRKH patients statistically had more pain during intercourse and they were less satisfied with their sexual life.

Conclusions

Creating neovagina by laparoscopic Davydov procedure by our experience is safe and feasible treatment for vaginal agenesis with a small complication rate, and it has a good functional and anatomical outcome. Patient compliance, regular vaginal intercourse and self dilatation afterwards plays a crucial role to achieve and maintain good outcome for the applied treatment.

Myoma morcelation before removal from the uterus – a laparoscopic technique for removal of very large myomas

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Background

Single large myomas that reach almost to the patient umbilicus (from 10 to over 15cm in diameter) present a problem for laparoscopic surgery. There is next to no space in the abdomen, the visualization is impaired and myoma removal can be very time consuming and bloody. So in order to modify the technique and simplify the procedure both placement of trocars and myomectomy technique need to be altered to be able to successfully perform this demanding surgery.

Methods

The trocars are introduced approximately 4-5cm above usual sites (umbilicus and lateral) – providing visualization and necessary space for manipulation. We usually use a ClearView trocar to create the pneumoperitoneum and introduce the camera port. Then using vasopressin solution lateral sides of the myoma are infiltrated. A circular opening is made on the perimetrium above the cranial part (highest point) of the myoma. Then the morcellator (Rotocut by Storz) is introduced, and the top (first 5-7 cm) of the myoma is shaved off. The bleeding is very minimal both because the most distal part of the myoma is morcellated and because of the effect of lateral vasopressin infiltration. This provides for a better area for manipulation and eases further myomectomy. The procedure is repeated for the next 5-7 cm of the myoma, until there is about 5cm or less of the myoma on the fundal part of the uterus. When this cornerstone is reached - a traditional laparoscopic enucleation of the remaining part of the myoma is possible and the defect in the uterine wall is reconstructed in two or three layers of running monofilament suture, as necessary. We prefer the “baseball stitch” suture with V-Lock, as this makes the procedure even more time proficient.

Results

The blood loss is not increased comparing to other laparoscopic myomectomies (myomas 5 to 10 cm in size), and the duration is just slightly elevated.

Conclusions

Three myomectomies following the described technique were done in the last 12 months at the Gyn&Obs Clinic Narodni Front in Belgrade, proving that the method is reproducible and safe. Ultrasound checkup after 30 days was performed.

Laparoscopic treatment of colorectal endometriosis: outcomes of 177 patients treated in an Endometriosis Unit

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Background

Analysis of the surgical and post-operative complications following 2 different surgical procedures for treatment of colorectal endometriosis: rectal shaving and segmental resection.

Methods

Retrospective comparative study using data from our endometriosis center in Liege (University tertiary referral center). The data of 177 patients with deep infiltrating colorectal endometriosis were collated in three different groups: rectal shaving (Group A=92), segmental resection (Group B=50) and shaving following a previous shaving (Group C=37). The complications were graded using the Clavien-Dindo classification and separated depending of the interval of appearance after the surgery (per-operative, immediate (during hospital stay), early (6 weeks) or late (up to 6 months)

Results

Mean ages were 31 year-old (yo) (group A), 34 yo (group B) and 35 yo (group C) respectively. Peroperative complication concerned 8.7% in group A, 2% in group B and 10.8% in group C, including uterine perforation and vascular injury. Immediate post-operative complications included Clavien-Dindo 3b in 0%, 4% and 2.7% in group A, B and C respectively, including intestinal anastomosis leakage (group B), ureteral injury (group B) and Douglas hematoma (group C). Early Clavien-Dindo 3b concerned 1%, 4% and 5.4% in the group A, B and C respectively, including pelvic abscess (group A and C), one rectovaginal fistula and ureteral stenosis (group B). Finally late complications concerned 1% in group A, 6% in group B and 0% in group C (intestinal occlusion in group A, Spiegel hernia in group B)

Conclusions

Our data suggests that our complication rates are low compared to the literature, even our surgical team do not use protective ileostomy in colorectal resection for deep endometriosis. Choice of the surgical techniques must depend on the extension of the disease and in skilled hands, either of them have good results with few serious complications.

Total laparoscopic hysterectomy – Profile at a university teaching hospital

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Background

Hysterectomy is the most frequently performed major gynaecological operation. The advantages of the laparoscopic over the abdominal route are well established. In our unit laparoscopic hysterectomy is the default route for benign indications despite the increasing rate of case complexity. We report the outcomes of laparoscopic hysterectomy in our department which is also an oncology and endometriosis centre.

Methods

All patients undergoing laparoscopic hysterectomy between 1/1/2018 and 31/3/2018 were included. Data was collected from the theatre register and electronic hospital records. Patients were followed up for a period of 6 weeks post-operatively.

Results

Fifty two patients underwent laparoscopic hysterectomy during the study period. Median age was 51 years (range 28 - 80). The mean Body Mass Index (BMI) was 29.4, with 7/52 (13.5%) having BMI \geq 35. More than two thirds of patients (71.2%) had surgery for benign indications (including endometrial hyperplasia). Of the 15 patients who underwent the procedure for malignancy, 4 had concurrent pelvic lymphadenectomy. Uterine size was more than 12 weeks in 8% of cases. One patient had a subtotal hysterectomy whilst all others underwent total hysterectomy. Average blood loss was less than 50 ml. Seventy-nine percent of patients were discharged on the first post-operative day while 94.2% were discharged by day 2. There were no conversions to laparotomy intraoperatively. Our complications included 1 case of primary haemorrhage requiring return to theatre and laparotomy and 3 patients with vaginal cuff haematoma. Two resolved with conservative management and 1 was drained vaginally in the ward.

Conclusions

Our study supports the advantages of laparoscopic route for hysterectomy in terms of low blood loss, short hospital stay and better postoperative recovery with low rate of major complications. Continuous auditing of outcomes and complications is necessary to identify areas for improvement.

umbilical endometriosis: a report of four cases

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Background

Extrapelvic endometriosis accounts up to 15% of all cases of endometriosis. Umbilical endometriosis, also known as Villar's nodule from the first physician describing the disease, is rare with an estimated incidence of 0.5% to 1.0% of all patients with endometriosis. It may be associated with abdominal surgical procedures involving the umbilicus or occur spontaneously. Postsurgical umbilical endometriosis may be due to transplantation of viable endometrial cells into scars at the time of surgery. Spontaneous umbilical endometriosis is supposed to arise from transport of endometrial cells via lymphatic and vascular channels, or develop through metaplasia of urachus remnants. We reported four cases of umbilical endometriosis managed over a ten-year period.

Methods

Medical records for patients with surgically-proven endometriosis from 2008 through 2018 in our institution were retrospectively reviewed. Cases with diagnosis of umbilical endometriosis were identified. Clinical information of age, symptoms, methods of diagnosis and management were summarized.

Results

Between 2008 and 2018, there were 421 surgically-proven cases of endometriosis, Four women had diagnosis of umbilical endometriosis. The mean patient age at presentation was 41 years (range 36-48 years). Cyclical bleeding during menstruation localised to painful umbilical nodule was the main clinical feature in these patients. Only one patient had a previous surgery, this was a caesarean section. In all cases, pelvic ultrasound showed no evidence of endometriosis in the pelvis and there were no other symptoms suggestive of pelvic endometriosis, hence laparoscopy was not performed. The umbilical lesions were dissected from the deep plane and widely excised. There was no evidence of connection with the peritoneal cavity, and ensuing defect was primarily closed without using prosthetic mesh. The histological appearance of all specimens was consistent with endometriosis with both glandular and stromal elements. At the follow-up visit (from 6 to 48 months after surgery), no symptoms or signs of recurrence were evidenced.

Conclusions

Umbilical endometriosis is a rare disease, but should be considered in the differential diagnosis of umbilical lesions in women presenting with a painful or bleeding mass close to the umbilicus. The differential diagnoses include urachal lesions, nodular melanoma, primary or metastatic carcinoma, various granulomas, hernia, cheloid and embryologic rests. Complete excision and histology is highly recommended for obtaining a definitive diagnosis and to rule out malignancy.

'Minor' complications post laparoscopy – a hidden world?

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Background

Laparoscopy is an operative procedure that gynaecologists perform on an almost daily basis. We consent our patients prior to surgery for most of the significant or frequently occurring risks, which often become apparent immediately or shortly after the surgery. Much less attention (and doctor awareness) is paid to the 'minor' complications of these procedures including: scar infection (literature suggests that umbilical port site infection varies between 8 and 89%) and/or dehiscence, urinary tract infection, chronic post operative pain, new vaginal discharge and bloating.

Methods

We conducted a prospective study at our institution into patient post laparoscopic operative recovery experiences by gathering details of 100 patients (age, BMI, previous operations, co-morbidities) and their primary procedures: 'minor' (diagnostic laparoscopy), or 'major' (including: laparoscopic bilateral salpingectomy, adhesiolysis, hysterectomy, removal of ectopic pregnancy, sterilisation, treatment of endometriosis). We also collected surgical data (including: length of procedure, antibiotic use at induction, number and size of ports and blood loss). We conducted a telephone questionnaire approximately four weeks afterwards to enquire about their recovery and hence gathered information on any complications which they experienced post discharge. The information was collected and analysed using Excel.

Results

28% of patients reported post operative port site scar infection or GP attendance +/- starting a new medication in the four to six week period post laparoscopic procedure. 20% reported abnormal vaginal bleeding lasting longer than seven days post procedure. 16% reported ongoing abdominal pain, 12% reported port scar site dehiscence and 8% of patients reported new vaginal discharge. These findings seemed not to be influenced by the minor or major category of their surgery, patient BMI or age.

Conclusions

Our findings suggest that this (often) hidden world of post operative complications causes considerable morbidity for our gynaecological patients. It also impacts on the workload of our general practitioner (GP) colleagues, which can only add to the burden of an already stretched NHS system. More time should be spent addressing these issues pre-operatively to better prepare the patient of the potential protracted recovery period after their laparoscopic surgery, potentially equipping them with better knowledge as to what to expect. Surgical techniques, methods of port closure, antibiotic and analgesia use also need to be reviewed.

A case of endometrial cancer with tubal metastasis detected during laparoscopic surgery after long-term MPA therapy

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Background

Medroxyprogesterone acetate (MPA) therapy is useful as a fertility preservation treatment for early endometrial cancer, but poses a risk of progression and recurrence during the treatment.

Methods

We report a case that despite remission after long-term MPA therapy, the patient could not get pregnant by assisted reproductive technology (ART). She subsequently underwent laparoscopic surgery with curative intent and found bilateral tubal metastasis.

Results

The patient is 43 years old, G0P0. She has unremarkable past medical and family history. At the age of 40, she started MPA therapy after being diagnosed with endometrial cancer stage IA (histopathological subtype, endometrioid adenocarcinoma Grade 1). After 10 months of treatment, she achieved complete remission based on MRI findings and histological findings by whole endometrial curettage. After that, she received ART, but no pregnancy was established. Eleven months after the first MPA therapy ended, complex atypical endometrial hyperplasia was confirmed by endometrium biopsy, indicating that her endometrial cancer has recurred. She resumed MPA therapy after received a sufficient explanation about its risk. After 9 months of treatment, the endometrial cancer was in remission again. ART was performed once more, but she did not get pregnant, and decided to stop fertility treatment because of her age. After 5 months from the end of the second MPA therapy, we decided to perform a laparoscopic total hysterectomy and bilateral salpingo-oophorectomy considering the risk of recurrence. Intraoperatively, we found a 5mm size tumor on the fimbria of the fallopian tube. Although the result of intraoperative pathological diagnosis was adenocarcinoma, there was a possibility of primary fallopian tube cancer, we performed the operation as planned. From the macroscopic finding of the resected uterus, there was a 13mm mass near the left oviductal orifice. Both fallopian tubes appeared normal. The magnified vision during laparoscopy is useful for the identification of the left fimbria lesion. A pathological diagnosis from the paraffin-embedded tissue was stage IIIA endometrial cancer, endometrioid adenocarcinoma Grade1 (pT3aNXM0) with bilateral tubal metastases. We plan to perform second operation for retroperitoneal lymph node dissection after which adjuvant chemotherapy will be provided.

Conclusions

After long-term MPA therapy, careful assessment is necessary to check for recurrence. Once the patient has opted out of fertility preservation, surgery with curative intent should be recommended as soon as possible.

Review of the Endometriosis apps

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Background

Smartphone applications (apps) are equivalent to programs run on personal computers. The interest in smartphones, has brought the field of mobile health (mHealth). Despite the big number of women with endometriosis and the severity of their symptoms, mHealth apps within this field have not been reviewed to date. The aim of this study is to assess the status of contemporary apps targeted at endometriosis and women with chronic pelvic pain.

Methods

Smartphone mHealth apps specifically relating to endometriosis and chronic pelvic pain, were identified by searching the largest app stores (Apple iTunes, Google Play, BlackBerry World). Only apps in the English language were included.

Results

26 app were in total included in the study for further analysis.

Nine apps (34.6%) are clinical guidelines providing information about the diagnosis, the clinical management and the treatment. Seven apps (27%) are social networking, allowing users to share their stories and experiences of endometriosis. Eight apps (31%) were patient's diary. Only 12 from the 26 apps (46%) had documented evidence base practice. Eleven (42%) had Medical Professional involvement in their development. 16 apps functioned as educational tools, only 6 (37.5%) had documented evidence base and 4 health professional input.

Conclusions

As technology portability, ubiquity, accessibility at point of care delivery and processing power of smartphones offers huge potential in the healthcare context. This is the first study to review apps targeted on endometriosis and is a valuable reference for clinicians, app designers, and policy makers with an interest in the area.

Cesarean scar ectopic pregnancy: a case report

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Background

Cesarean scar pregnancy (CSP) is ectopic pregnancy where gestational sac implants into the fibrous tissue of a cesarean section (CS) scar. Approximately 6% of ectopic pregnancies are CSP. Incidence of CSP is increasing because of a rising number of CS.

Patients with CSP may be asymptomatic or present with vaginal bleeding and/or abdominal discomfort. Ultrasound imaging is the main diagnostic tool for CSP. The clinical diagnosis of an early CSP can be difficult and may occasionally be delayed until uterine rupture occurs which leads to potentially fatal hemorrhage. The risk of recurrence of CSP has been reported as 3,2-5,0% in women with previous CSP managed by dilatation and curettage. Theoretically, surgical management by laparotomy with closure of the defect should reduce the risk of recurrence, however recurrence after surgical repair has been reported.

Treatment options are individualized according to gestational age and presentation, usually with the aim of removing the gestational sac, preventing hemorrhage and retaining future fertility. Medical methods entail systemic or local administration of methotrexate (MTX). Surgical methods include uterine suction curettage; hysteroscopic evacuation of the mass; laparoscopic / open excision and resuturing or hysterectomy. Interventional radiology techniques like uterine artery embolization have also been successfully employed.

Methods

Case report A 34-year-old female, G4 P2, with history of two previous cesarean sections (2007; 2010) and one previous scar pregnancy (2008). CSP was previously managed by laparotomy with removal of the products of conception and repairment of the myometrial defect.

The patient was admitted with slight vaginal spotting.

On transvaginal scan cesarean scar pregnancy was confirmed. On the sagittal view of the uterus endometrial cavity was empty, endometrial thickness was 1,17cm. Ectopic gestational sac was visualized at the lower anterior uterine segment, at the cesarean scar site. Echogenic wall of the gestational sac extended close to the serosal surface of the uterus, bulging out of the uterine contour. The fetal pole was identified in the gestational sac with crown-rump length of 10 mm, corresponding to 7 weeks 1 days. Fetal cardiac activity was noted and normal yolk sac was seen. Cervix appeared normal and closed.

Results

Treatment: The patient was initially managed medically with intramuscular MTX injection; after 2 days exploratory laparoscopy and cervical dilatation and curettage was planned.

Laparoscopy: The urinary bladder and abdominal wall were densely attached to the anterior uterine surface, due to which uterine scar region was not visualized. Suction curettage was performed under the guidance of ultrasound and laparoscopy. The procedure was successful and blood loss was 100 ml.

Conclusions

The recurrent pregnancy cesarean section scar is rare and needs to be properly diagnosed as soon as possible to avoid complications. Management of MTX with surgical suction curettage is safe method for CSP treatment and preserves fertility.

The beginning of the end for surgical management of non-ruptured ectopic pregnancy

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Background

Methotrexate is an established treatment for ectopic pregnancy. The UK Royal College of Obstetricians and Gynaecologists (RCOG) guideline quotes 65-95% success rates, dependent on diagnostic and treatment thresholds. This is a broad range, making it challenging to counsel women when making decisions regarding their care. We aimed to evaluate the success of methotrexate in the management of non-ruptured tubal ectopic pregnancy in our hospital.

Methods

A retrospective audit was conducted of women between 2012 and 2017 in the Royal Infirmary of Edinburgh who were diagnosed with tubal ectopic pregnancy and treated with methotrexate. Hospital records were used to confirm the ultrasound-based diagnosis and track outcomes. Each woman was followed from diagnosis to resolution of the index pregnancy. This was defined as serum beta-hCG of <5iu/l or definitive surgical management. Results were presented as an infographic.

Results

A total of 774 women were diagnosed with tubal ectopic pregnancy in this study. First-line methotrexate (50mg/m² body surface area) was offered to and accepted by 397 (51%) women. Criteria for diagnosis and beta-hCG cut-offs were conservative and closely adhered to contemporaneous RCOG guidelines. Methotrexate treatment without recourse to surgery was successful in 344 (87%) of these women, of which 290 (73%) required only a single dose. A total of 53 (13%) women who received first line methotrexate subsequently required surgical management.

Conclusions

These data corroborate that methotrexate is effective for the management of non-ruptured ectopic pregnancy. Our hospital adheres to evidence-based thresholds for the use of intramuscular methotrexate. The majority of women who underwent tubal surgery for ectopic pregnancy would have preferred medical management. Performing surgery on these women misalign clinical practice to patient preference. Almost 9 in 10 of such operations may have been entirely avoidable. This represents a high financial healthcare cost and carries psychological morbidity for the women.

Gynaecologists who wish to introduce or expand the use of methotrexate in their departments can have confidence that our data support its efficacious use by adhering to national guidelines. This has been the case for almost 400 women over 6 years, with a large number of gynaecologists making individualised clinical decisions.

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Selected Posters

Crash Section or Car Crash? Tiredness amongst O&G doctors in training

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Background

Following the death of an anaesthetic trainee who was returning home after night shift, the Fatigue Group surveyed UK anaesthetic trainees about shift working and tiredness. The survey highlighted a wide variation in access to rest facilities, commuting distances and the effects of fatigue on trainees both in and out of work.

Obstetric and gynaecology (O&G) training, by its nature, involves mentally and physically challenging long day and night shifts. There is undoubtedly a similar situation and effect on O&G doctors. The aim was to define the situation with respect to O&G doctors' knowledge of fatigue, current resources available in each hospital, and doctors own approaches to combat acute tiredness.

Methods

All O&G doctors in training were invited to anonymously complete an online survey with 20 closed (drop-down menus) and open (free-text entry) questions. These questions explored the frequency of rest breaks, the facilities available in their hospitals for rest, and the degree trainees felt affected by fatigue while on nightshift. This included questions about near miss accidents while traveling home after nightshift.

Results

The survey was completed in full by 26 (87%) of the doctors in the region. Half of the trainees did not achieve the two 30 minute rest breaks which are mandatory during a typical 12 hour nightshift. Although 92% of the trainees had a rest area available for use during nightshift, the rest areas were felt to be too poorly furnished or entirely unsuitable to achieve any meaningful rest. In conjunction with this, 63% report always finishing nightshift tired and 96% always or usually finish nightshift tired. Near miss accidents reported in this survey included drifting across lanes on motorways, falling asleep queuing at traffic lights and driving through red lights. More than half (58%) of doctors had experienced this to date during their O&G careers. Two out of three did not have easy access to a room or space to rest if they felt too tired to safely drive home after their shift.

Conclusions

O&G is often compared to the aviation industry in terms of patient safety. The approach taken by aviation to combat tiredness has to also be the case for the care of the frontline healthcare workforce to help ameliorate the negative effects of tiredness.

The top five causes of fatigue are dehydration, inadequate sleep, repetitive work, poor lighting and skipping meals. The results of this survey have been used locally to guide the design of a mechanism to assess the safe ability of the doctor to drive after nightshift, to agree with the heads of departments to ensure rooms are readily available to trainees, and that access to healthy food and drink is always present.

Correlation between Adenomyosis and Endometrial cancer: 6-year experience of a single center.

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Background

Although adenomyosis is usually a benign condition, sometimes the adenomyotic tissue might conceal premalignant or malignant disease. Adenomyosis often co-exists and is described in the pathological reports, after surgery for endometrial cancer. The aim of this study is to describe the clinicopathological and oncological characteristics of patients suffering simultaneously from these two pathologic entities and further investigate the malignant transformation of the adenomyotic tissue.

Methods

We retrospectively reviewed the medical records of all patients that underwent hysterectomy for endometrial cancer from January 2012 until December 2017 in our clinic. The pathological reports were extensively studied and when adenomyosis was present, the relevant pathological slides were independently reviewed by two pathologists in order to discover any premalignant or malignant change in the adenomyotic tissue. The clinicopathological characteristics and oncological results were described.

Results

Out of 229 cases of endometrial cancer, 64 (23%) patients had concurrently endometrial cancer and adenomyosis. Among these 64 patients, 7 (11%) had malignant transformation of adenomyosis. The mean age of patients suffering from both endometrial cancer and adenomyosis was 63.2 years old and 57 (89%) of these patients, had early endometrial cancer (FIGO stage IA-IB). Out of these patients, 22 (34.4%) had grade I, 36 (56.2%) grade II and only 6 (9.4%) had grade III tumors. Moreover, in this special group of patients with concurrent endometrial cancer and adenomyosis, 25 (39%) patients presented in the pathological report fibroids and 2 (3%) endometriosis. Concerning the patients with malignant transformation of adenomyosis, their mean age was 65 years old with no premenopausal case. There was only 1 case of recurrence and none death due to cancer.

Conclusions

Adenomyosis, as a benign disease, is described in the last decades, but its malignant transformation is not fully researched, due to the low incidence of this entity and the relative diagnostic problems. Further investigation is needed in order to clarify the pathologic progression of adenomyotic lesions to endometrial cancer and the associated prognosis of this disease.

Methodical review of underground by Grendel Games - a novel approach to laparoscopic training

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Background

Laparoscopic simulation is essential for training in gynaecological surgery. Currently, the majority of laparoscopic skills are initially taught on laparoscopic trainers (LT). Conventional LTs allow trainees to develop skills in a safe and accessible environment. Due to the predictable nature of LTs, however, trainees become well-practiced at reproducible manoeuvres but do not have opportunity to adapt to scenarios that occur in vivo.

When Nintendo and Grendel Games collaborated with a surgical team from Holland, their aim was to design a laparoscopic game simulator for surgical training that intended to address some of the limitations of conventional LTs with an evidence base.

“A basic level of the game was able to distinguish various levels of laparoscopic expertise and showed a high and significant correlation ($r = 0.812$, $P < 0.001$) to the FLS Peg Transfer task, a gold standard for measuring a wide array of laparoscopic skills, coordination, inverse movements and bi-manual dexterity.”

Our objective was to give an honest, methodical review of the game and its design.

Methods

The laparoscopic game with controller attachments were purchased at a cost of €19,95 and €249 respectively. It was necessary to already have a Nintendo WiiU/Wii® with two controllers. The game was played for a total of ten hours by an experienced surgical trainee and subsequently reviewed .

Results

Game set up was straightforward and the interface was user-friendly. The physical product is made from high quality materials, attaching easily to the Wii® controllers and accurately resembles laparoscopic instruments. ‘Underground’ is enjoyable to play – it is a puzzle game that requires the user to utilise a range of different tools to complete a variety of objectives. This includes grasping and drilling manoeuvres that would be reproducible in laparoscopic procedures. The game engine is designed to be unpredictable so operators have to adapt to complete the objectives. Overall gameplay difficulty increases with progression through the game, allowing the user to develop their skills as they advance through the levels.

Conclusions

‘Underground’ offers a light-hearted and engaging story with gameplay that is both fun and, at times, challenging. The manoeuvres necessary to complete objectives develop operators’ proprioception and the unpredictable scenarios require users to adapt in real-time – skills that are essential in laparoscopic surgery. Overall, ‘Underground’ offers significant training potential for junior trainees developing their surgical repertoire. For experienced trainees, however, it is unlikely that it would significantly develop their skills. The other key limitations are the lack of tactile feedback, which exist in conventional LTs.

In summary, in spite of the product’s limitations, it is well-suited for junior trainees developing their core surgical skills; it is well designed with an excellent user interface and potential for training.

Establishment and evaluation of a laparoscopic skills training programme for gynaecology trainees in Northern Ireland

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Background

The development of laparoscopic skills is a component of the trainee core curriculum and annual training matrix mandated by the Royal College of Obstetricians and Gynaecologists. Gynaecology trainees are required to demonstrate competency in diagnostic laparoscopy before advancing to simple and intermediate operative laparoscopic procedures as senior registrars. Central to laparoscopic surgery is hand-eye coordination and the development of 'muscle-memory' – hence, the need to practice regularly to build and maintain skill. To provide such an opportunity, a gynaecology trainee and gynae-oncology consultant set up a 12 week laparoscopic training programme accessible to all Northern Ireland gynaecology trainees. The programme aimed to offer weekly hands-on laparoscopic skills practice under consultant supervision to improve trainee knowledge, confidence and laparoscopic skill set.

Methods

Northern Ireland trainees were contacted and the interest in such a training programme gauged. A course programme was devised, compiling 12 sessions run weekly. Each session comprised a short lecture delivered by a trainee, followed by hands-on laparoscopic skills practice using box trainers. Trainees were supervised rotating through skills stations including 'hand-eye coordination', 'grasping and cutting', 'plane dissection' and 'laparoscopic suturing'. On completion of the 12 week programme, an end of course assessment was taken by trainees covering the knowledge-based component of the course with questions derived from lecture material. A course evaluation form was also completed by each trainee to gather feedback.

Results

Each trainee attended on average 7/12 sessions, with 'on-call' shifts cited as the main reason for non-attendance. Trainees of all grade were represented (40% Specialist Trainee (ST) 1-2; 30% ST 3-5, 20% ST 6-7). 100% of trainees found the course 'extremely useful', all describing the programme content, organisation and venue as 'excellent'. 90% of attendees felt the course 'very much' fulfilled their educational needs and learning outcomes. All trainees reported improvements in 'familiarity with laparoscopic instruments', 'general dexterity', and 'time taken to complete tasks' on completion of the course. 60% of trainees described their laparoscopic skill level as either 'very poor' or 'poor' prior to undertaking the programme, all improving to average or 'good' after 12 weeks. Trainees described the best aspects of the course as the 'hands-on practice' and the valuable 'feedback from supervising consultants'. When asked if they would re-attend a similar course in the future, 100% of trainees said 'yes'.

Conclusions

This laparoscopic training programme was met with enthusiasm and commitment by gynaecology trainees. The end-of-course evaluation demonstrated a clear improvement in trainee confidence levels and laparoscopic skills set. The authors hope to build on this initial positive feedback by further promoting and developing the laparoscopic training offering in Northern Ireland through the establishment of a formal annual programme to provide ongoing trainee access to regular, supervised laparoscopic skills training.

Urological complication rate at hysterectomy

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Background

This study aimed to examine and compare the urological injury rates (ureteric, bladder and vesico-vagina fistula (VVF)) in all types of laparoscopic, open and vaginal hysterectomies.

Methods

This was a retrospective case note analysis of urological injuries identified intra-operatively, and up to six weeks post-operatively in all elective hysterectomies performed over 3 large teaching hospitals in Glasgow between February 2017 and October 2017.

Results

In total 986 hysterectomies were performed in the 9 months from February-October 2017. We found that that a total laparoscopic hysterectomy (TLH) had a 1.9% (3/154) risk of ureteric injury, 1.3% (2/154) risk of bladder damage and a 0.65% (1/154) risk of VVF. A laparoscopic subtotal hysterectomy (lap STH) had a 1.8% (1/56) risk of ureteric injury and a 0% risk (0/56) of bladder damage or VVF. A laparoscopic assisted vaginal hysterectomy (LAVH) was found to have a 3% (3/100) risk of ureteric injury versus a 1% (1/100) risk of bladder injury. Overall LAVH had the highest risk or urological injury at 4% compared to 3.2% and 1.8% of TLH and Lap STH. When comparing this to open procedures, we found a total abdominal hysterectomy (TAH) posed a 0.6% (3/488) risk of ureteric injury, 0.8% (4/488) risk of bladder damage, and 0.4% (2/488) risk of VVF. An open STH posed a 0% (0/83) risk of ureteric injury or VVF and a 3.6% (3/83) of bladder damage. The overall urological injury rate in an open TAH was 1.4% versus 3.6% for a subtotal. Out of 105 vaginal hysterectomies, 0 cases of urological injuries were identified.

In all cases of VVF, a bladder injury was also found. The finding of a VVF does therefore not increase the overall urological complication rate as these cases had already been identified as a bladder injury.

Conclusions

Our case note analysis of 986 hysterectomies has shown that the overall risk of a urological complication is highest with a LAVH at 4% and lowest with a TAH at 1.4%. When comparing laparoscopic hysterectomies (TLH and lap STH) versus open hysterectomies (TAH and STH) the rates of ureteric injuries is 1.9% with laparoscopic cases compared to 0.5% of open cases. The risks of bladder injury is 0.95% with laparoscopic hysterectomies and 1.2% with open procedures. Overall a laparoscopic STH produces the fewest urological injuries in all cases of laparoscopic hysterectomies in keeping with previous research that has been published.

Posters

Retrospective comparison of traditional ligation vs bipolar vessel sealing during total abdominal hysterectomy for fibroids

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Background

Total abdominal hysterectomy (TAH) is the most commonly performed gynecologic procedure, with more than 600000 performed annually in the United States. Uterine fibroids represent the most common indication for TAH.

The Impact LigaSure™ is a heat-sealing device which has been incorporated in the performance of many open operative procedures, including TAH.

The aim of the present study is to compare the postoperative outcome of TAH performed with the Impact LigaSure™ vessel sealing system versus conventional suture ligation hysterectomy.

Methods

The clinical charts of 76 patients admitted at Careggi University Hospital of Florence for fibroids between January 2014 and November 2015 were retrospectively analysed. Patients included in the study were submitted to type A laparotomic hysterectomy (according to Querleu-Morrow classification) and were divided in two subgroups: cases group (Ligasure, 38 patients) and controls group (conventional technique, 38 patients). For all patients demographic, preoperative and postoperative data was reported including the following variables: pre and postoperative haemoglobin, operative time, post-operative pain (measured by the VAS scale), length of analgesic therapy, days of hospital stay and the duration of vesical the catheter placement. Univariate analysis was performed to verify any difference between the two groups and it included chi-square analysis or Fisher's exact test when appropriate for categorical variables and the Student t test and Mann–Whitney test when appropriate for continuous variables.

Results

Both groups showed similar demographic and preoperative details. Statistically significant differences arose from the comparison between the two groups in terms of: operative time ($p < 0,001$), postoperative pain ($p < 0,024$), length of analgesic therapy ($p < 0,001$), the day of the catheter removal ($p < 0,001$) and hospital stay ($p < 0,026$). All the above-mentioned variables were significantly lower in the cases group. No significant difference was registered for the operative blood loss between the two groups ($p = 0,655$).

Conclusions

The present study demonstrated that the Impact LigaSure™ vessel sealing system is a safe alternative for the synthesis of vessels and tissues and the tissue cutting applied to TAH. It is associated with significant improvement in postoperative outcome allowing clinicians to save operating time, number of postoperative days, and duration of analgesic therapy.

Posters

Complications of the laparoscopic hysterectomy: a prospective study

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Background

This study has the purpose of evaluating the immediate and tardive complications of total laparoscopical surgery, in 2 gynecology clinics.

Methods

A retrospective study was performed on 259 surgical interventions, on a period of 7 years (01.03.2011- 01.03.2018). Out of these 259 patients in which a laparoscopical hysterectomy was attempted, in 240 (92.66%) cases the surgery was completed successfully, with the closure of the vaginal cuff. In the remaining 18 patients, the laparoscopical procedure was converted into a laparotomy. The surgical indication consisted of benign uterine pathology and uterine neoplasms stage IA or „in situ” cervical neoplasms. The majority of the operative pieces were extracted through the vaginal pathway, but in the case of large fibromas morselators were also used. Prophylactic anticoagulants were administered postoperatively. Postoperatively, the patients were monitorised between 2 months and 3 years.

Results

33 (12.74%) out of the 259 patients presented complications. Intraoperative complications occurred in 22 patients (8.49%). Conversion to laparotomy was necessary in 19 patients (7.33 %). In 17 cases (6.56%) this conversion was caused by the presence of large intraligamentary fibromas or extended aderenial syndromes, in one case by a ureteral lesion and in another case due by a urinary bladder lesion. Other 3 cases (1.15 %) had urinary bladder lesions which were accidentally discovered and laparoscopically sutured. Postoperative complications appeared in 11 patients (4.24%). Venous thromboses complicated 3 cases (1.15 %). In 2 cases (1.15 %) a bleeding of the vaginal cuff occurred, which was resolved between the 14th and 18th postoperative day with a compressive vaginal tampon. In one of the patients, who developed peritonitis (0.38%), the laparoscopical lavage and drainage of the abdominal cavity, followed by antibiotherapy was sufficient. Two of the cases were complicated by a hemoperitoneum (0.77%), with one of them requiring lavage, drainage and blood transfusion and the other one laparotomy and resuturing of the vaginal cuff. In one case a sigmoido-vaginal fistula (0.38%) was found on the 7th postoperative day, which required a laparotomy with an iliac anal sphincter, followed by reimplantation of the sigmoid. One case with a ureteral fistula (0.38%) (developed 6 weeks after surgery), required a cystoscopy stent placement. A vaginal cuff prolapse (0.38%) appeared two months after surgery and was resolved through a procedure of attachment to the sacrospinous ligaments. More than half of the complications (17 cases out of 33) actually led to a conversion to laparotomy due to the local pathological conditions. Eight out of the 11 postoperative complications appeared in the first three years since our team began to perform laparoscopical procedures.

Conclusions

Complications of total laparoscopical hysterectomy are rare. Their frequency decreases with the surgical team's accumulation of experience.

Transabdominal laparoscopic approach for treatment of pudendal nerve entrapment syndrome

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Background

To report our first case of laparoscopic pudendal nerve (PN) decompression for bilateral PN entrapment (PNE). PN entrapment (PNE) syndrome is characterized by unilateral or bilateral neuropathic pain in the PN distribution and is caused by the compression of the nerve at different levels along its course: at the ischiatic spine, between the sacrospinous and sacrotuberous ligaments, at the falciform process of the sacrotuberous ligament, by the obturator fascia in Alcock's canal, or by the piriformis muscle. The diagnosis of PNE remains mainly clinical and can be suggested by the Nantes criteria. It has been demonstrated that the decompression of the PN is an effective and safe treatment for PNE and it can be accomplished through different approaches: transgluteal, transperineal, or laparoscopic transperitoneal.

Methods

In this video, we describe all the steps of this procedure, performed on a 36-year-old female patient suffering from PNE. Previously, the transperineal technique has been performed by a vertical para-anal incision, which gives access to the ischiorectal fossa. The inferior rectal nerve was followed to Alcock's canal, which is opened to relieve the PN compression. After this surgery, the pain had a decrease in the mean preoperative visual analog scale score of 9 to 1 points. However, the pain reappeared after a physical effort. The anesthetic infiltrations of the PN (bupivacaine and triamcinolone), under computed tomography guidance, showed positive PN block.

The lateral paravesical space was dissected. After the visualization of the obturator nerve and the internal iliac vein, the dissection was carried on more deeply until the ischiorectal fossa. The fat tissue of the ischiorectal fossa was bluntly dissected, exposing the sacral nerve roots S2–S4. Laterally, the internus obturator muscle was identified, covered by its fascia. The anterior retraction of the border of the ischiococcygeus muscle allowed the exposition of the sacrospinous ligament, which crosses the pudendal trunk, a cord-like structure composed of the PN and the internal pudendal vein and artery. Transection of the sacrospinous ligament allowed the dissection of the pudendal trunk, suspended on a vessel-loop, downward to the entrance in the Alcock's canal. The nerve was carefully liberated along all its course.

Results

Total operative time was 90 minutes, and estimated blood loss was less than 100 cc. The postoperative clinical course was uneventful, and the patient was discharged on postoperative Day 1. The patient's postoperative course was uneventful. Six months after surgery, the pain had a decrease in the mean preoperative visual analog scale score of 8 to 2 points and the patient was drug-free.

Conclusions

We showed the feasibility and effectiveness of the laparoscopic transperitoneal approach to the pelvic somatic nerves, with surgical advantages that could potentially extend the indications of laparoscopic PN decompression.

Laparoscopic repair of vesicovaginal fistula after laparoscopic hysterectomy

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Background

The most common etiology of vesicovaginal fistula (VVF) in developed countries is surgical trauma or thermal necrosis associated with gynecologic procedure (approximately 0,5 % of hysterectomies). Vesicovaginal fistula are late onset complications often difficult to manage. The surgeon has to choose the adequate surgical approach but also the right moment to perform the repair.

Methods

This video aims to show the feasibility of laparoscopic approach to the fistula and to evaluate long-term outcome. We present a case of a 52 year old woman who underwent a laparoscopic hysterectomy. Two weeks later she complained of heavy liquid discharge who turned out to be urine.

On the CT scan a 10 mm vesicovaginal fistula was showed. The communication did not close after a two weeks of bladder catheterisation with bad tolerance. A surgical repair was proposed. The cystoscopy showed a médium fistula in the posterior bladder wall, 2cm away from the left ureteral meatus.

Left ureter was stented intraoperatively, and a thin rigid catheter was introduced through the fistula coming out from the vagina by citoscopy. At laparoscopy, no adhesions were present. A cleavage plane was developed between the bladder and the vagina. The rigid catheter was easily found allowing the surgeon to identify the vesical and vaginal holes. Both of them were slightly enlarged until healthy bleeding borders appeared. Double-layer closure was performed with 2/0 resorbable sutures using interrupted stitches at the vagina and running sutures at the bladder. Care was taken to prevent opposition of each suture line. Bladder was filled again to assess its integrity. Additionally omental flap was performed and placed between both sutures.

Two weeks later a retrograde cystography was performed showing a complete healing of the fistula. The catheter was removed

Results

Operation time was 140 minutes. The blood loss was 320 ml. Hospital stay was two days, and the patient was discharged with bladder catheter. We could report a complete remission of the VVF in the oneyear follow-up.

Conclusions

Laparoscopic approach is feasible in late onset urinary tract injuries and has the advantage of providing magnification, allowing better defect specific repair. Advanced skilled gynecological surgeons with pelvic surgery training should be able to deal with this type of complications.

Robot-assisted single-site and multiport laparoscopic hysterectomies: surgical outcomes and complications

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Background

Robot assisted hysterectomy has rapidly increased in numbers, since the first operation was performed in 2002. In Herning and Holstebro Hospital, Denmark, the first robot-assisted multiport hysterectomy was performed in 2014 and the first single-site hysterectomy, in autumn 2017. Indications for benign hysterectomy are abnormal uterine bleeding, fibroma, dysplasia, pelvic pain and familiar cancer disposition e.g. Hereditary Breast and Ovarian Cancer (HBOC) or BRCA. With the single-site entry the women gets a scar in her umbilicus on 2.5 cm. No assisting ports were added. Halfway through the study a change in surgeons were made.

Methods

A retrospective cohort study was conducted with 198 women who underwent robot-assisted laparoscopic hysterectomy performed in Herning or Holstebro Hospital, Denmark, from 2014 to 2017 was conducted. 166 multiport and 32 single-site operations were included. Data on height, weight, BMI, surgical approach (multiport or single-site), concomitant ooforectomy, post operative complications and the need for readmission were collected from electronic patient files.

Results

The womens age was 46 years (range 29 to 77). Their BMI ranged from 19 to 45 kg/m². The weight of the uterus varied from 30 to 305 grams. The mean operation time was 91 minutes (44 to 193). The blood loss during the surgery was 68 ml (10-600). Blood loss was associated with BMI and the weight of the uterus. 24% of women had a postoperative complications. Most of them were minor complications such as vaginal bleeding (8.5%), abdominal pain (3.5%), urinary tract infection and problems emptying the bladder (2.5%), haematoma in the vaginal cuff (1.5%), infection in a haematoma (2%) and abscess (1%). No lesions of neighboring organs were registered. 2% of the women had major postoperative complications. All were vaginal cuff rupture that needed re-suturing. One woman needed blood transfusion. Five women had 2 or more complications. In total 10 % of the operated women were readmitted. When compared with the numbers of complications related to hysterectomy on benign indications throughout Denmark (recorded in the Danish Hysterectomy and Hysteroscopy Database), we did better in almost all parameters. Only postoperative vaginal bleeding was higher represented.

Conclusions

Because of the single-site entry, we now offer hysterectomy to the women in a minimal invasive way that gives them the absolut minimal scar. Most of the complications to robot-assisted hysterectomy are minor. Robot-assisted single-site hysterectomy is feasible and safe and a good surgical option.

Unusual cases of adnexal torsion in pre-menarchal girls; 5 case series presenting a great challenge in diagnosis and management

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Background

Adnexal torsion is a rare gynaecological emergency, accounting for about 3% of all cases of acute abdominal pain in adult women. More than two thirds of cases are seen among women above 20 years. Occurrence of adnexal torsion is extremely rare in young girls. Its preoperative diagnosis remains a challenge because the clinical signs and symptoms are vague and similar to other acute abdominal conditions. Therefore, rapid diagnosis cannot be achieved easily. In the same time, it requires an early surgical intervention to save the ovary from gangrenous necrosis that is of a special concern in such an age group.

Methods

This is a report five uncommon cases of adnexal torsion in childhood, presented during the last 3 years (from June 2015 to March 2018), the age was ranging from 5 – 10 years old. The variable data of the five cases were collected and compared, including age, clinical picture, imaging and laboratory data, in addition to laparoscopic findings & final management.

Results

All cases were presented with vague signs and symptoms of sub-acute onset. Laboratory investigations were not conclusive, but imaging -particularly ultrasound- was suggestive. In three cases the affected adnexa were detorted and saved, while in the remaining two cases, excision of the gangrenous adnexa was done.

Conclusions

Diagnosis of adnexal torsion in young girls is very challenging. A high grade of suspicion should be present for cases of lower abdominal pain to provide early diagnosis and treatment in order to save the ovaries.

A case of disseminated peritoneal leiomyomatosis 10 years after a laparoscopic myomectomy.

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Background

Disseminated peritoneal leiomyomatosis (DPL) is a rare benign disease characterized by numerous smooth muscle-like cell nodules disseminated among the abdominal cavity. To date, approximately less of 200 cases have been described. The pathogenesis of DPL is not well-known. DPL is often asymptomatic. Some cases are associated with surgical procedures on uterine fibroids, especially with the use of a morcellator during laparoscopy. We report the case of a woman with DPL who has undergone laparoscopic myomectomy, by morcellator, ten years before.

Methods

A 43-year-old woman, with a past medical history of uterine fibroids laparoscopy surgery with morcellation in 2007, complained of abnormal uterine bleeding since one year, associated to the presence of a manually palpable mass in her high abdomen. In July 2017, transvaginal ultrasound showed multiple uterine fibroids, the largest of which was posteriorly located and measured 7.5x6.7x5.2 cm. Then, the patient underwent lower abdomen magnetic resonance, which showed fibrous uterus and numerous myomatous masses in the abdominal cavity, the largest of which measured 95x75 mm and was observed in the context of the mesorectal tissue, associated to dislocation and compression on rectum; a second mass, placed under umbilical line and posterior to abdominal wall, measured 27x29 mm; in left iliac fossa, between rectus abdomen muscle and medial margin of the oblique muscle a third mass of 34x27 mm was observed. Nuclear magnetic resonance of upper abdomen showed, on the left side, below the kidney, in the context of adipose tissue, an expansive, capsulated, solid mass, indissociable from intestinal loops, large 70x73x66 mm. A second mass, next to previous one, not contiguous, measures 39x38x32 mm. Patient performed laboratory test, including tumoral markers (CA-125, CEA, alpha-fetoprotein) and lactate dehydrogenase (LDH) isoenzymes, resulted normal.

Results

The patient underwent laparotomy with transabdominal hysterectomy and bilateral salpingo-oophorectomy; at the same time two pelvic peritoneum masses were removed and sent for extemporaneous histological examination, that showed smooth muscular tissue without cytological atypia, compatible with a clinical diagnosis of peritoneal leiomyomatosis. Then sigma-rectum and two more masses adhered to it were resected and a termino-terminal anastomosis was performed. Definitive histological examination confirmed the diagnosis of DPL. Immunohistochemical evaluation was positive for the smooth muscle antigen, progesterone receptors, and estrogen receptors, but was negative for cytokeratin. The patient has been undergone abdomen ultrasound after two months from the surgery and no alteration has been proved.

Conclusions

Although DPL is a very rare disease, it must be suspected whenever multiple pelvic formations are observed, especially in patients previously treated by surgery for myomatosis. In fact, laparoscopy on uterine fibroids may be a cause of DPL occurrence, particularly in the case of incautious use of morcellator: in this regard, in-bag morcellation should enable safe morcellation of intra-abdominal specimens, avoiding the peritoneal dissemination.

Incidence of unexpected uterus malignomas after power morcellation and survival outcome's analysis: a retrospective multicenter study in Germany

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Background

Due to the development of MIC, power electromechanical morcellation (EMM) became a routine technic. Despite the important advantages of morcellation, it may be associated with dissemination of uterine tissue throughout the peritoneal cavity and spread of an occult malignoma, which can result in cancer upstaging. The aim of this study is to estimate the frequency of unexpected malignoma's appearance in morcellation and its clinical impacts in a patient cohort in two departments.

Methods

This retrospective study included patients traced from 2008-2017. The authors identified women who underwent laparoscopically or robotically myomectomy or hysterectomy because of symptomatic myomas and the use of EMM.

Results

The authors analysed 1226 patients who have had LASH (44 %), TLH (6.8 %) or myomectomy (49.2 %). Unexpected malignancy after EMM was detected in 3 of 1226 patients, which represents the 0.24%. In all three cases the malignancy was proved to be a sarcoma (2xLS, 1xESS). The patients were treated with a re-operation for completion of staging. Only one of the three patients (case I) showed intraabdominal recurrence after 63 months which could be treated with a third operation, where complete resection could be achieved. The other two cases had a follow up of 42 (case II) and 31 (case III) months after the operation without evidence for intraabdominal recurrence. The patients were in good condition and one of them (case II) exhibited sternal metastasis after 36 months. One case of vaginal manual morcellation of LS after TLH was detected. One case of vaginal manual morcellation (case IV) of LS after TLH was detected. A re-operation wasn't indicated. Intraabdominal recurrence was found after 9 months, which was treated with palliative chemotherapy. After 2 months she underwent a laparotomy with tumor debulking because of tumor's regression. The patient died 9 months after the reoperation.

Conclusions

There is a small risk of occult malignoma in EMM to spread out. Risk factors for presence of occult malignancies have to be considered. In high-risk patients, EMM should be avoided. The various methods' development of tissue extraction could minimise any dissemination risks.

Endoscopic surgical management of isthmocele

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Background

To demonstrate the value of surgically managing an isthmocele and the post-operative evolution of ten patients who exhibit symptoms of a wound dehiscence as a consequence of a cesarean section.

Methods

All patients underwent a laparoscopic laser repair technique and the uterine scar was sutured in two planes except for one patient.

Results

All the patients had preoperative residual myometrium less than or equal to 3 millimeters. The mean residual thickness was measured at 1.84 millimeters. These values were measured by endovaginal ultrasound for all the patients. It should be noted that some patients underwent pelvic MRIs which confirmed the residual myometrium thickness. Retroverted uterus was noted in only one patient. After six weeks, a postoperative control was planned for each of the patients: an endovaginal ultrasound was performed and showed an increase in the residual myometrium in all but one patient. The mean postoperative myometrium thickness was measured at 7.7 millimeters. For the patient who had a suture in one plane, the postoperative myometrium was measured at 3 millimeters (two millimeters preoperatively) however this patient also had a retroverted uterus.

Three months after the surgery, a sonohysterography was carried out: the end result was confirmed in nine out of ten patients with an increase in the myometrium thickness.

Conclusions

An isthmocele is therefore a little-known complication of a caesarean section. It comes from a bad scarring process resulting in a cavity in the anterior wall of the uterus. The symptoms may be chronic pelvic pain, spotting or bleeding, or secondary infertility. Management is mainly surgical, either by laparoscopy or hysteroscopy. The choice of the therapeutic method depends on the presence of a desire for pregnancy or not. If pregnancy is desired, laparoscopy is the first choice. This treatment improves the thickness of the residual myometrium as well as the relief of symptoms. Hysteroscopy is preferred for patients who no longer have a desire for pregnancy. This type of treatment has no influence on the thickness of the residual myometrium but relieves the patients with regard to metrorrhagia or chronic pelvic pain. It is also recommended to treat hysteroscopically only patients with a preoperative residual myometrium more than or equal to three millimeters. We have to note that having an retroverted uterus is a risk for developing an isthmocele and it may also lead to a poorer response after surgical treatment. This is why a bilateral round ligament suspension should be performed in case of a retroflexed uterus.

The isthmocele should be considered as a possible cause for patients with symptoms of metrorrhagia and a laparoscopic repair should be proposed instead of a hysterectomy. This procedure has the advantage of having less postoperative complications and its psychologically well accepted by the patient as an alternative.

A report of outpatient hysteroscopic morcellation of uterine pathology in an Irish Secondary Care Centre.

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Background

Abnormal uterine bleeding is the most common reason for referral to secondary level gynaecological services (1) and therefore a significant burden on the healthcare system. Intracavitary polyps and submucosal fibroids are the underlying pathology in 30-50% of these cases (2). Hysteroscopic morcellation can be used to remove uterine pathology under direct visualisation in the outpatient setting, with the added benefit of real time tissue fragmentation and removal, keeping the operative field clear. Mayo University Hospital introduced this practice in the ambulatory gynaecology setting in August 2017. The aim of this study was document number of cases undertaken in a 6 months period. To examine patient demographics, morcellation time, complication rates of procedure and to assess acceptability of procedure to patients.

Methods

Retrospective data collection was undertaken. Acceptability was assessed by telephone survey of patients greater than 6 weeks post procedure.

Results

Nine patients had outpatient hysteroscopic morcellation in the time period set. The mean age was 51.78 (range 39-71). One third of patient were nulliparous. 8 patients had uterine polyps and 1 had a submucosal fibroid. Eight had total resection of endometrial pathology, with 1 treatment discontinued secondary to pain (speculum not tolerated, hysteroscopy not attempted). In terms of analgesia, 6 of the patients opted for pre-operative analgesia in the form of paracetamol, tapendolol and ibuprofen. Of these, 5 required additional intra-operative local anaesthetic. Three patients declined pre-op analgesia, and these all required intra-operative local anaesthesia. Mean morcellation time for polyps was 55.8 seconds (range 9-141 seconds). Morcellation time of fibroid was 11 seconds. Regarding patient acceptability, 75% said they were satisfied with the procedure, with the same number opting to recommend it to a friend/expressing their willingness to undergo the same procedure again should the need arise. Note: one patient was lost to follow up. The only complication reported was that of pain in the case that was discontinued. Of 8 specimens obtained, 5 were benign and 3 showed hyperplasia.

Conclusions

Our findings suggest hysteroscopic morcellation of benign uterine pathology is feasible and acceptable to patients in the outpatient setting with minimal complications. A larger cohort is needed to confirm these promising results.

The management of pelvic adhesion under laparoscopy

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Background

Pelvic adhesion is very usual in gynecological surgery. It is the most common reason to cause a series of deputy injuries and complications. And it's also the reason to cause the laparoscopic surgery failure changing to laparotomy.

Methods

The character of different kinds of pelvic adhesion was summurized and analyzed.

Results

Pelvic adhesion includes the adhesion developed in endometriosis, adenomyosis, or the pelvic neoplasm adhesion after hysterectomy, or the adhesion after uterine fibroids divest and other surgical operations, or in supplementary surgery after incomprehensive staging surgery about malignant tumors, which have different characteristics, and different treatments. Laparoscopic surgery has the advantage of broad visual field, special visual angle, easy to expose adhesion surface. While electrical equipment has the advantage that to be handled intensively and has ascertain haemostatic effect. Both together have the special superiority compared with laparotomy.

Conclusions

Thus it is the important key to decrease deputy injury, while to master necessary operation principle and skill, then to play to the superiority of laparoscopy.

A complicated case of benign teratoma

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Background

Case Study: The patient was a 46 year old para 1 woman with mental health comorbidities of chronic schizophrenia and mild learning difficulties. Medical comorbidities included morbid obesity (BMI>54), type 2 Diabetes, limited mobility (confined to bed) and a known 18cm septated benign ovarian cyst. She presented acutely to the emergency department after falling at home, with severe abdominal pain and vomiting and feeling generally unwell. She was unstable with hypotension and tachycardia. When assessed on admission haemoglobin was 108 g/L, lactate 6.8, she had an acute kidney injury with creatinine 322 umol/L, CRP 400 mg/L and WCC 42 10⁹/L. CT scan showed "interval enlargement and poor definition of the adnexal cyst and a large volume of free intraperitoneal fluid". She was initially admitted to the surgical ward for treatment for sepsis with IV antibiotics, however renal function deteriorated further, requiring HDU admission for haemodialysis for 4 days. Following this renal function normalized. Over 2 weeks 19L of ascitic fluid were drained and repeat CT showed "similar amount of ascites with known ovarian cyst, possibly ruptured and an incidental large intra-abdominal hernia". USS guided biopsies demonstrated necrotic soft tissue only and cytological analysis of the peritoneal fluid was negative for malignancy.

Methods

Pre-operative planning: Multidisciplinary operative planning involved gynaecology, general surgeons, anaesthetics and ICU and it was decided that the gynaecology team would take the lead surgically. This was complicated by morbid obesity and psychiatric comorbidities, as her usual psychiatric medications had been stopped. Capacity was formally assessed by a consultant psychiatrist pre-operatively, who determined she had capacity to consent and make decisions regarding her own care. She consented for laparotomy and removal of ovarian mass once her condition was stabilized. She had her haemoglobin optimized by blood transfusion and chest physiotherapy to improve respiratory function.

Results

Three weeks after admission, when her condition improved, she underwent midline laparotomy, right salpingo-oophorectomy and excision of hernial sac from the umbilicus. Operative findings were: normal left adnexa and uterus, large multiloculated cystic mass in the pelvis/abdomen loosely adherent to bowel and omentum with possible inflammatory loculations in the upper abdomen and dark brown free fluid in the abdomen and pelvis. She was admitted to ICU post-operatively. Histopathology confirmed benign teratoma with infarcted areas and areas of dystrophic calcification with no evidence of immaturity or malignancy.

Conclusions

Post-operative Management: She had a protracted (>12 weeks) hospital stay to allow multidisciplinary care planning for discharge. Post-operative course was also complicated by clostridium difficile infection secondary to antibiotics. After a prolonged time without her usual antipsychotics she was evidently delusional and required re-introduction of medications as a psychiatry inpatient. Fortunately with dietetic input and regular physiotherapy for mobility she lost over 40kg weight after surgery and could now mobilize unaided.

The outcome of postmenopausal women attending out patient hysteroscopy clinic

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Background

The postmenopausal bleeding service sees approximately 2000 women per year. Patients with postmenopausal bleeding (PMB) are invited to undergo a transvaginal ultrasound and pelvic examination +/- an endometrial biopsy. There are a number of indications for referral for an out patient hysteroscopy following this appointment.

- If bleeding is considered recurrent, defined as 2 attendances to PMB clinic with 2 benign endometrial biopsies more than 6 months apart in the last 2 years.
- If a polyp is suspected on ultrasound, or confirmed by histology.
- If a submucosal fibroid is suspected on ultrasound or confirmed by histology.
- If the endometrial thickness on ultrasound is ≥ 11 mm or indeterminate.
- If a biopsy is not possible in the clinic or considered inadequate by histology.

The objective is to determine the outcome of these patients and evaluate the referral pathway from Postmenopausal bleeding clinic to the outpatient hysteroscopy (OPH) service using the above referral criteria.

Methods

We reviewed the data from 1000 consecutive hysteroscopies on women with postmenopausal bleeding over a period of 4 years and analysed the data.

We correlated the ultrasound findings from the postmenopausal clinic to the hysteroscopy findings.

We also analysed the histology to the endometrial pipelle sample in the PMB clinic.

Results

191 (20%) of these women were found to have endometrial polyps which were removed and 191 (20%) were found to have fibroids which were resected. Of the remaining 572 patients 112 (11.7%) had directed biopsies taken while 460 received no treatment at hysteroscopy, deemed diagnostic only. The hysteroscopy findings and the histology from the samples obtained in the outpatient hysteroscopy clinic were correlated to the findings in the PMB clinic

Conclusions

About 40% of the postmenopausal women referred for OPH had treatment performed for either polyps or fibroids, The largest correlation was when the endometrial thickness was noted to be more than 30mm on ultrasound or when a polyp with a feeder vessel was noted. The number of women receiving diagnostic hysteroscopy only is significant at 48% of the total postmenopausal referrals over a 4 year period. We review and present the correlation of the findings in the PMB clinic and whether the referral for recurrent PMB is responsible for the high number of negative hysteroscopies.

Based on the findings we suggest a change in referral criteria from PMB clinic to OPH clinic is needed particularly what should be considered as recurrent PMB.

Endometriosis associated pain: how can we help?

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Background

Endometriosis affects up to 10 % of women in the reproductive age. Its prevalence is estimated to be in the region of 50 % among women with subfertility.

Variable signs and symptoms often make it difficult to diagnose the disease. Moreover, the severity of the symptoms is not usually a true reflection of the severity of the underlying disease.

Endometriosis associated pain can be detrimental for a woman's life. This effect can extend to the partners in most cases resulting in difficult relationships.

Methods

This review of literature includes a review of the various guidelines published by different organizations including The European Society for Human Reproduction and Embryology (ESHRE), The American Society for Reproductive Medicine (ASRM), The National Institute for Clinical Excellence (NICE) and The Cochrane Database.

Results

Various modalities have been on the table for treatment of Endometriosis associated pain. Medical treatment includes hormonal and non-hormonal. Surgical treatment varies from simple ablation to total pelvic clearance. Non-medical treatment had its role in the subject. The final say is for the women to decide which works best for them guided by healthcare professionals and in light of the available information and evidence.

Conclusions

Endometriosis associated pain represents not only a health concern but also an economic and social burden. Various treatments have been proposed over time. It is necessary to recognize the individual needs and concerns of each and every patient when discussing the treatment options.

Laparoscopic sacrocolpopexy for advanced pelvic organ prolapse (descensus uteri III-IV, cystocele III-IV, rectocele III-IV) using mesh

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Background

Aim of the study is to evaluate long term recurrence results of 82 Patients treated laparoscopically to repair advanced (III-IV) genital prolapse.

Methods

A non-randomised prospective analysis of 82 women, who underwent laparoscopic genital prolapse repair at St. Luke's Hospital in Thessaloniki, Greece and at Mother and Child Medical Centre in Nikosia, Cyprus. The patients with Descensus uteri underwent total laparoscopic hysterectomy with BSO and then laparoscopic sacrocolpopexy using two different kind of mesh. PRR for either zytocele or rectocele and PRS for both.

Patients characteristics, preoperatory exams, intraoperative, postoperative and follow up clinic data were collected and analyzed.

Results

The mean operative time of the laparoscopic sacrocolpopexy using PRR for zytocele (23 min), for rectocele (20 min) and using PRS for both (34 min).

All the patients were reviewed at 1 moth, 3 months, 9 months and then every 6 months after the surgery for a period of 5 years. The follow-up was between 6 months and 5 years (2011-2017).

There were no major intraoperative or postoperative complications and we had no mesh exposure or erosion. The mean hospitalization stay was 2.1 days.

Conclusions

The laparoscopic sacrocolpopexy using dyna-mesh is an effective and safe technique to repair the pelvic organ prolapse. The long term anatomical functional results are very satisfactory with no major complications.

Accumulated experience in surgical research and training after the implementation of a gynecological laparoscopic surgery training model

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Background

For more than 20 years in our centre we have developed training programs for several surgical specialties (urology, general surgery, thoracic surgery, paediatric surgery, etc.) as well as different lines of surgical research around minimally invasive surgery. One of the fields that have been developed most throughout this time is the gynaecology that has led us to implement different experimental models used in surgical research and training courses for the development of surgical skills. The aim of our work is to share the experience of our centre in the use of experimental models in the field of gynaecology.

Methods

In our centre, the learning stages are divided into four levels where different experimental models are included, its application depends on the experience and skill of the surgeon. In the first stages of learning the use of non-organic tissues and cadaver organs, in simulators, allow the surgeon to know and manage the instruments of laparoscopic surgery. Subsequently, the use of live animal models allows the development of different surgical techniques depending on the experience of the surgeon.

Results

We are presenting our experience during the last 10 years in which 37 basic and 15 advanced gynaecological courses, 15 courses of colposacropexy and 9 courses of fetoscopy have been developed and in which more than 1000 gynaecologist have assisted.

Conclusions

The use of experimental models, before performing the surgical techniques on the patient, is essential to develop surgical skills and can reduce the learning curve in the different procedures.

Laparoscopic management of the tubal perforation with Essure microinsert: a case report

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Background

Uterine or tubal perforation is a rare, but serious complication of Essure hysteroscopic sterilization with potentially severe side effects, such as acute or chronic pelvic pain, adhesions, peritonitis and unwanted pregnancy.

Methods

The 36-year-old multiparous patient underwent Essure hysteroscopic sterilization at a regional hospital in September 2017. During the sterilization process, microinsert was placed only into the left tube, with 2 coils of the microinsert remaining visible in the uterine cavity. Insertion of the microinsert into the right tube was unsuccessful in two different attempts within one month interval due to tubal spasm. VAS pain score for the sterilization was 10/10. One month after the hysteroscopic sterilization, the patient sought help and requested for final sterilization at our hospital. She denied any pelvic or abdominal pain. A transvaginal ultrasonography was performed to determine the location of the left microinsert, which was unsatisfactory.

Results

Due to patient's request for sterilization, unilaterally performed hysteroscopic sterilization and the suspicion of tubal perforation as a result of an unsatisfactory microinsert location and unusually high VAS pain score during the sterilization, we have decided to perform a laparoscopy with bilateral salpingectomy and to remove the microinsert. A consultation with an experienced gynecologist in a tertiary gynecological center was made prior to the surgery. During the laparoscopy, tubal perforation on the left side was detected. Microinsert perforated the proximal isthmic part by forming a large loop outside the fallopian tube. Only a small part of proximal and distal ends of the microinsert were located in the uterus and in the fallopian tube. The distal end of the microinsert was carefully released from the isthmic part of the fallopian tube with linear salpingotomy along the antimesenteric border of the fallopian tube near the left horn of the uterus using the bipolar coagulation and scissors. Once the distal part was released, the loop of the microinsert was straightened and the microinsert was grasped with a forceps and slowly extracted out of the intramural part in one piece as a whole. Then, bilateral salpingectomy was performed for contraception. There was no blood loss during the surgery. On the second postoperative day, the patient was discharged without complications and with desired permanent contraception.

Conclusions

In the case of the tubal or uterine perforation during the Essure hysteroscopic sterilization, a laparoscopic retrieval of the microinsert should be considered, given that severe complications can occur. The removal of the microinsert can be challenging and requires an experienced surgeon. Therefore, a consultation with an experienced gynecologist in a tertiary gynecological center was made prior to the surgery. When managing the complications of Essure hysteroscopic sterilization, the original indication should not be forgotten and an alternative form of sterilization should be performed.

Use of a porcine model for training in transperitoneal pelvic and para-aortic lymphadenectomy
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Background

to report the surgical steps in a live porcine animal model for the practice of transperitoneal pelvic and para-aortic lymphadenectomy.

Methods

The anatomical similarities that the porcine species presents with respect to humans allow us to master in the techniques of pelvic and para-aortic lymphadenectomy. Both procedures are performed with the animal in dorsal recumbency. Four ports were used to carry out pelvic lymphadenectomy. Surgery starts with the dissection and removal of the medial iliac lymph nodes to continue with the deep inguinal nodes and, finally, with the sacral and anorectal lymph nodes. In the case of para-aortic lymphadenectomy, Five ports were used for the dissection of the renal and lumbar aortic nodes. The surgical steps followed to develop this technique were: access to the retroperitoneum, dissection and separation of the retroperitoneum to create a tent, localization of the anatomical landmarks, dissection of the paracaval lymphatic tissue, dissection of the inter-aorta-cava space and lastly, the dissection of lymphatic tissue.

Results

We have standardized the use of the porcine experimental model for the practice of pelvic and para-aortic lymphadenectomy.

Conclusions

this model would help to reduce the learning curve associated with lymphadenectomy procedures as an additional model for another animal species, ex vivo methods or fresh, frozen or Thiel cadavers.

Models to predict unsuccessful endometrial ablation: external validation

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Background

External validation of our previously presented prediction models to help counsel patients for failure of endometrial ablation (EA) or surgical re-intervention within 2 years after EA.

Methods

This retrospective cohort study had a minimal follow-up time of 2 years. Data from Ziekenhuisgroep Twente, Almelo/Hengelo and Medisch Spectrum Twente, Enschede, both non-university teaching hospitals in the Netherlands, was used for external validation. Patients selected were pre-menopausal women (18+) who've had an EA for heavy menstrual bleeding between January 2010 & November 2012. A total number of 329 patients were eligible for analysis. Interventions used were Novasure (Hologic, Marlborough, Massachusetts, US) and ThermaChoice III (Ethicon, Sommerville, US). Used interventions had the same outcomes according to previously published literature.

Results

Data-analysis was done by using IBM SPSS statistics software version 21.0 (IBM Corp., Armonk, NY, USA). Preliminary results showed an area under the curve of 0.59 for the outcome of failure within 2 years. Variables in this model were dysmenorrhea, low age, parity ≥ 5 and preoperative menorrhagia. The Hosmer-Lemeshow showed no significant difference between the observed and predicted outcome. The area under the curve for the outcome of surgical re-intervention within 2 years was 0.45. Variables in this model were dysmenorrhea, low age, menstrual duration > 7 days, parity ≥ 5 and a previous caesarean section. The Hosmer-Lemeshow showed no significant difference between the observed and predicted outcome.

Conclusions

The first prediction model can be used to predict failure within two years after EA. This model, used prior to surgery, may contribute to improve tailor-made shared decision making regarding EA in the general population. The re-intervention model appeared to be not useful after external validation, but can still be used in our hospital.

Based on all acquired data we will work further on a big data model that is able to support this most personalized form of patient counselling, so that both prediction models can be used in the general population.

Recurrent thoracic and severe pelvic endometriosis managed by endoscopic procedure – case report

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Background

Endometriosis most commonly involves the pelvis. The endometrial tissue can be found extra-pelvic in the abdomen, thorax, brain, and skin. Thoracic endometriosis is a clinical syndrome: ectopic endometrial tissue is deposited in thoracic structures. Thoracic endometriosis has been shown to occur simultaneously with pelvic endometriosis in approximately 50% to 80% of the cases. When patients present with both pelvic and thoracic symptoms and the surgical intervention is necessary, both procedures should be performed by endoscopy.

Methods

Methods: Case report

A 35-years-old (G0) female had first laparoscopic operation in October 2015, proved peritoneal endometriosis. In November 2016 was admitted to Emergency Department because of chestpain, breathlessness during menstruation. Thoracic computed tomography has shown pneumothorax on the right side with suspected right sided thoracic endometriosis. The patient was referred to Thoracic Surgery of Department of Petz Aladar County Teaching Hospital (tertier center), where video-assisted thoracoscopy (VATS) was performed. Endometriosis involved diaphragma was excised and sutured by endoscopic procedure. In February 2017 the patient was operated by multidisciplinary laparoscopic team, retrocervical endometriotic nodule was removed and made left ureter shaving. Based on histopathologic findings the patient was treated with GnRH analogues for six months. Before the beginning of medical therapy during menstruation pneumothorax has recurred in March 2017. It was managed by chest drain, which evacuated air to re-establish lung expansion. Despite of the medical treatment menstruation reappeared with consequent pneumothorax, that was treated by chest drainage and pleurodesis in December 2017. **Results**

Results (Discussion)

Thoracic endometriosis should always be suspected in young women with catamenial pneumothorax or hemothorax. Recurrent pneumothorax occurs in 8 to 40 percent of patients despite the combined approach of surgery and hormonal suppression. In such patients, the diagnostic and therapeutic approach is often performed simultaneously. Both pelvic and thoracic endometriosis can be operated by endoscopic procedure. Nezhat et al have published a study including twenty-five patients, which examined outcome of combination of video-assisted thoracoscopy and traditional laparoscopy at the same time. **Conclusions**

The thoracic endometriosis is a rare entity, but the incidence of this extragenital endometriosis form is increasing. For treatment of deep infiltrating endometriosis laparoscopic procedure in tertiary centre is suggested. The advantages of laparoscopic operation can be also useful in the thoracic surgery. Video-assisted thoracoscopy as minimally invasive approach has more benefit for patients than thoracotomy. Most patients with thoracic endometriosis have abdominopelvic endometriosis as well. In case of concomitant thoracic and abdominopelvic endometriosis we suggest endoscopic procedure in tertiary referral center.

Primary operative hysteroscopy can be avoided in non-significant ultrasound finding

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Background

As many women are directed to surgical hysteroscopy due to abnormal sonographic findings, we aimed to describe the cases in which it is beneficial to start the procedure with prior diagnostic hysteroscopy.

Methods

A retrospective cohort study in which we compared the sonographic finding as was described in the referral letter with the hysteroscopy finding as well as the pathologic result. Data collected from patient's medical record. The study took place in a tertiary academic affiliated medical center and was approved by the Institutional Review Board (IRB). 174 cases referred to surgical hysteroscopy between 2013-2016 were included in this study. cases with polyps with no specification of size or polyps up to 1.5 cm were counted as group 1, cases with polyps 1.5cm or larger were counted as group 2. Pathology results were categorized as relevant if there was a finding indicating surgical hysteroscopy as stated in sonography's report. Sonography's PPV was calculated for each group

Results

For the first group (cases with polyps with no specification of size or polyps up to 1.5 cm) PPV was 77.5%. for the second group (polyps 1.5cm or larger), PPV was 94.8%. Differences between the two groups were statistically significant. In 4 cases there was no finding in hysteroscopy and a polyp was found in pathologic examination of uterine samples. In the first group we had one case in which there was a polyp described in hysteroscopy and pathology had no abnormal finding. There were no such cases in group 2.

Conclusions

In case of polyp smaller than 1.5 or a non-significant result in sonography, one can consider doing another sonographic exam to issue or exclude the finding. Another option is to perform a diagnostic hysteroscopy without anesthesia.

Impact of 3D ultrasound in the follow-up of genital prolapse surgery in correlation with patient satisfaction

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Background

Objective.- The main objective of our study is to evaluate the impact of prolapse surgery on the measurement of the surface of the genital urinary hiatus.

Methods

Material and method.- A prospective longitudinal study was conducted between April and July 2017 in the gynecology department of the University Hospital of Angers. Patients are operated either by laparoscopy (promontofixation) or vaginally (with or without the placement of a prosthesis). After informed information of the patient and with her agreement, a questionnaire before-after surgery of satisfaction is given to her. A 3 D ultrasound and a clinical examination by simplified POP-Q measurement are performed before and after surgery by the same operator with the measurement of the surface of the genital urinary hiatus and the perineal angle.

Results

Results.-14 patients are included in the study: 7 operated by the high way and 7 by the vaginal route. For the satisfaction of the patient, after surgery, we find an improvement in the PFDI-20 score from 89.36 to 37.87 average ($p = 0.006$) but the PFIQ-7 score does not show a significant difference ($p = 0.096$). The evaluation of POP-Q shows a significant improvement for Ba ($p = 0.005$) and for C or D ($p = 0.03$). The surface of the urogenital hiatus decreases significantly from 20.87 to 16.55cm² average ($p = 0.0001$) and the perineal angle from 72.89 to 61.61 ° average ($p = 0.001$).

Conclusions

Conclusion.- Quality of life criteria before and after surgery are important to look for before surgery. 3D ultrasound is an interesting complementary examination with the measurement of the surface of the genital urinary hiatus and the perineal angle to evaluate the impact of surgery. A preoperative threshold, if validated on the surface of the urogenital hiatus or perineal angle should be able to improve the treatment of prolapse.

Laparoscopic management of a high-grade endometrial stromal sarcoma mimicking submucous leiomyoma. A case report

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Background

A case of high-grade endometrial stromal sarcoma (HG-ESS) presenting like a submucous leiomyoma is reported. Uterine sarcomas are rare neoplasms comprising 4–9% of all malignant uterine neoplasms. Among those ESS is an uncommon entity of uterine malignancy, accounting for 6–20% of all uterine sarcomas. The pathogenesis of ESS is unknown, but exposure to tamoxifen, unopposed estrogens, and conditions such as polycystic disease of ovary are implicated. There is a relation between chromosomal aberrations and endometrial sarcomas, the YWHAЕ-FAM22 translocation identifies HG-ESSs. In multivariate analysis, older patients (age more than 50 years), black race, advanced stage, lack of primary surgery, nodal metastasis, high mitotic count, CD10 negative or low expression and lack of estrogen and progesterone receptors were independent prognostic factors for poor survival. Furthermore, survival in patients with HG-ESS appears to be related to the extent of residual disease after initial surgery and would suggest the necessity for aggressive cytoreduction as a main modality of treatment. Some authors recommend lymphadenectomy for both prognostic and treatment purposes.

Methods

A 49 year old woman presented with menorrhagia. Ultrasound evaluation revealed an intrauterine lesion 56x49 mm in diameter with heterogeneous appearance and high central vascularisation. Hysteroscopy was performed with an indication of submucous leiomyoma and shows a tumour like submucous myoma and it was partially resected by hysteroscopic electric morcellator. Pathological diagnosis was undifferentiated endometrial carcinoma. Immunohistochemistry (IHC: Pan CK-/ EMA-/ CD10-/ Smooth-muscle actine (SMA) -/ Desmin-/ CD45-. Ki67: 40%). CT scan does not show any suspect retroperitoneal lymph nodes. This video shows the laparoscopic staging of the high grade endometrial carcinoma. Sentinel lymph node biopsy with ICG, retroperitoneal paraaortic lymphadenectomy (in this case the vena cava is twofold), omentectomy, pelvic lymphadenectomy and total hysterectomy with bilateral salpingo-ophorectomy was performed without an infiltrative margin.

Results

Surgical time was 210 minutes, blood loss was 241 cc. and hospital stay was 3 days. Final pathological diagnosis was HG-ESS. Size 6x5 cm. Myometrial invasion more than 50% with wide lymphovascular invasion. Immunohistochemical analyses was performed: Vimentin+, ciclinD1+, cd10-/+, p53-, estrogen/progesterone receptors -, SMA -, desmin-. Ki67: 40%. None of the sentinel lymph nodes were positive at intraoperative frozen section and the final study. However, the metastatic lymph node involvement was reported in 1/44 removed pelvic lymph nodes, and in 3/32

para-aortic lymph node. Staging laparoscopy was performed and FIGO stage of the patient was stage IIIc. Accordingly, adjuvant therapy was administered with chemotherapy and radiotherapy

Conclusions

ESS usually grow into myometrium, however, they may involve endometrium and present as an intrauterine pathology. Histopathological diagnosis is a must in all intrauterine lesions. Because of the large variation in pathologic characteristics, combined with scarcity of patients, there is insufficient information about an optimal management.

Evaluation of the endometrial cavity after myomectomy by hysteroscopy

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Background

The main objective was to evaluate the endometrial cavity and identify the presence of uterine synechiae in patients diagnosed with uterine myoma who underwent myomectomy hysteroscopy, and also the number of patients that need another surgery.

Methods

Thirty six medical records of patients were reviewed in an outpatient follow-up, following the criteria: age, uterine volume, obstetric history, European classification of submucosal myoma, previous surgery and evaluation of the endometrial cavity by outpatient hysteroscopy after myomectomy

Results

Patients had a mean age of 42,58 years. Altered endometrial cavity was found in 19,44% of the patients who had undergone myomectomy hysteroscopy. Uterine synechiae was found in 8,3% of these patients and uterine myoma in 11.1% of the cases.

Conclusions

Patients who underwent myomectomy hysteroscopy had altered endometrial cavity in 19,44% of the cases, being 8,3% the presence of synechiae, which was discharged outpatient, and in 11.1% the presence of submucosal myoma was noticed, being necessary another myomectomy hysteroscopy. It shows that hysteroscopy is a good way to perform myomectomy, very effective and with low complication rates.

Prevalence of uterine synechiae after abortion evacuation curettage

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Background

The aim of this study was the evaluation of the prevalence of uterine synechiae after abortion evacuation curettage and its association with epidemiological profiles of this patients.

Methods

This was a cross-sectional study at the Gynecologic Endoscopy Unit of a University Hospital. During 12 months (from february to june 2015, from april to july 2016 and from january to march 2018) all women who had been subjected to uterine curettage following abortion were invited to this study. The hysteroscopy was performed after 30 to 90 days after the curettage and they answered a short questionnaire to collect socio-demographic data. This study includes 48 women who desire future pregnant.

Results

Out of these 48 participants, 37,5%(18) had intra uterine synechiae. This study includes 16-45 years-old women and was on average 29,9. A total of 10,4%(5) of the patients who had infection symptoms and signs when they were subjected to uterine curettage following abortion and 40%(2) of them had synechiae. Out of these 18 patients who had intra uterine synechiae, all of them were solved at ambulatorial hysteroscopy without complications.

Conclusions

In the present study 37,5%(18) of the 48 total participants, had intra uterine synechiae. Women who had infection symptoms and signs do not increased the prevalence of synechiae. We highly recommend hysteroscopy after abortion evacuation curettage if a future pregnancy is desired by the patient.

Surgical and postoperative complications by laparoscopy in patients with endometriosis

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Background

The aim of this study was to report the surgical and postoperative complications in laparoscopy for endometriosis occurred in the reference hospital.

Methods

From September 2017 to May 2018, a multidisciplinary team (gynecology, urology and gastric surgeons) at the reference hospital performed 35 laparoscopy surgeries for endometriosis. This is a prospective study in which were performed the medical monitoring in patients undergoing surgical treatment for endometriosis. There was a survey of medical records to identify complications in the surgeries and postoperative.

Results

Three complications were found. The first one in a period of less than 7 days, with a diagnosis of urinary retention and pyelonephritis. The patient was submitted to a clinical treatment and antibiotic therapy, with improvements of 30 days.

The second one had a bowel dehiscence during the surgical act and was submitted to a colostomy. The reconstruction was successfully done after 5 months.

The last one had wall infection after 3 days and pelvic abscess after 7 days. Another laparoscopy was performed and had a bowel dehiscence during the surgical act and submitted to a colostomy. After 31 days was diagnosed deep vein thrombosis.

Conclusions

The three interurrences that occurred were quickly identified and monitored appropriately, improving the initial complaints of these patients. Improved quality of life and relatively low risk of complications keep surgical treatment an excellent option when needed.

Evaluation of agreement between transvaginal ultrasonography and magnetic resonance of the pelvis in endometriosis with laparoscopic findings

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Background

The aim of this study is to compare transvaginal ultrasonography performed after bowel preparation (US) and magnetic resonance (MR) in the diagnosis of endometriosis.

Methods

In a cross sectional retrospective study, 35 patients were analyzed in endometriosis ambulatory of Hospital Municipal de VN Cachoeirinha from September 2017 to March 2018. Preoperative US and MR were collected. Endometriosis final diagnoses were confirmed by laparoscopy surgery.

Results

Twenty-three patients underwent US, resulting in 79 suggestive endometriosis focuses observed. Twenty of them were false positives; no alteration was detected in intra-operative. In 49 false negative diagnoses, the most difficult to diagnose were bladder lesions, followed by ureter lesion. It has been verified that 59 results agreed with surgery diagnoses, which represents 72.1% agreement between US and laparoscopic.

Twenty-three patients underwent MR. Seventy-nine alterations were observed, in which 58 were compatible with intra-operative results, representing a total of 73% of agreement between surgery and the imaging method. The false positive rate was 26.5%. The MR did not diagnose 16 endometrial lesions, regarding fallopian tubes as the most difficult to diagnose. **Conclusions**

The present study results are in agreement with previous studies: both MR and US have been considered accurate methods in the diagnosis of endometriosis, emphasizing that US has shown discreet better results concerning sensitivity and specificity.

Diagnosis and surgical treatment of cesarean scar defect

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Background

The aim of the study is to assess the efficacy of surgical treatment of Cesarean scar defect in patients of reproductive age using laparoscopic and laparotomy can approach.

Methods

25 women of reproductive age (29-41 years old) with Cesarean scar defect were investigated by transvaginal ultrasound with dopplerography, MRI with contrast enhancement and office hysteroscopy. 12 patients (48%) underwent laparoscopic repair of uterine scar defect and in 13 patients (52%) the repair of Cesarean scar defect was performed by laparotomic approach. Both groups were similar according to the symptoms, age, body mass index, parity, gynecological and somatic co-morbidities. The follow-up period was 28 months (range 4-60 months).

Results

The technique of uterine scar defect repair was the same for laparotomic and laparoscopic approach: the cervical canal was dilated by Hegar dilators to No. 10-11, the uterine manipulator (Clermont-Ferrand model) was inserted in the cervical canal, the lower segment of anterior uterine wall was exposed to vaginal vault. For excision of fibrotic tissue we used scissors. The anterior uterine wall was closed by 1 layer of interrupted musculo-muscular sutures Polysorb 0 or Vicryl 0. The peritoneum was closed by continuous suture. The operation time was 100+20 minutes. The blood loss in the first group was 70+25 ml, in the second group-250+50 ml. Rehabilitation in the early postoperative period was faster in the first group vs the second group.

All the patients were satisfied by the results of the operation. During the follow-up period the patients reported the improvement of quality of life due to disappearance of clinical symptoms.

Ultrasound examination in 1,3 and 6 months after the operation showed the normal thickness of myometrium in the lower uterine segment (9-11 mm) and an adequate blood flow at the site of the scar.

In 6 months after the operation the niche wasn't visualized any more during office hysteroscopy.

6 patients (24%) became pregnant in 9-23 months after the operation and delivered at term by Cesarean section. 4 women (16%) are currently pregnant (from 9 to 22 weeks of pregnancy) and 3 patients (12%) are going to undergo IVF program. 12 patients (48%) use contraception at the time.

Conclusions

Combination of contemporary methods of investigation (ultrasound, MRI, office hysteroscopy) significantly improves the diagnosis of Cesarean scar defect. The efficacy of Cesarean scar defect repair by laparoscopic and laparotomic approach is similar; in both groups the quality of life was improved and the achieved pregnancy rate was about 40%, but after laparoscopic surgery the rehabilitation is faster.

Minimally invasive office hysteroscopy in the diagnostics and safe surgery of intrauterine abnormalities in women with infertility

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Background

Intrauterine abnormalities prevent embryo implantation and successful development of pregnancy. The absence of complaints and ultrasound features of intrauterine pathology is not a reliable sign of the normal state of the uterine cavity.

Aim of the study: To increase of the efficacy of infertility treatment by detecting and treating the “hidden” pathology of the endometrium.

Methods

Patients: 165 women aged 30 to 42 years with infertility without complaints and ultrasound signs of intrauterine pathology.

Methods: clinical, laboratory, ultrasound examination, office hysteroscopy.

Results

All 165 patients with infertility underwent office hysteroscopy as a part of the comprehensive examination. 57 women showed no hysteroscopic signs of intrauterine pathology, during the procedure an endometrial biopsy with histological and immunohistochemical investigation.

In 108 women with infertility, intrauterine adhesions (61), small polyps in endocervix (12) and the endometrium (21), endometrial hyperplasia (14) were observed. Patients with endometrial hyperplasia underwent hysteroscopy and curettage, while the remain 94 patients had laser surgery by minimally invasive intrauterine approach.

In 3-6 months, 68 patients underwent follow-up office hysteroscopy.

Conclusions
Thus, office hysteroscopy and laser surgery showed to be high effective and precise method of treatment in women with infertility, including ART programs, facilitate to define the “hidden” intrauterine pathology and treat it properly.

The outpatient hysteroscopy experience at a district general hospital – patient satisfaction in ambulatory gynaecology

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Background

The clinical and economic benefits of outpatient hysteroscopy are well recognised. Patient satisfaction often focuses on pain scores during and immediately following hysteroscopy. We devised a detailed patient satisfaction questionnaire encompassing all aspects of the patient pathway to help identify areas of strength and weakness in the outpatient hysteroscopy experience.

Methods

A detailed patient questionnaire was given to patients to complete immediately following their outpatient hysteroscopy appointment. The survey was conducted over a 3 month time period.

Results

153 questionnaires were returned giving a response rate of 82%. The ages ranged from 25 years to 78 years with the majority of patients falling in the 51-60 years age group.

13 patients reported that they did not receive an information leaflet about the procedure prior to the appointment.

Of those who did receive a leaflet 98.5% found it to be useful.

146 patients found the department easy to find.

100% of the respondents found the department to be clean and tidy, the receptionists friendly and welcoming on arrival and the clinic staff friendly and welcoming.

Nearly half of all patients were seen on time or earlier than the scheduled appointment time and overall 71% of patients were seen within 15 minutes of their appointment time.

100% of patients felt they were given adequate time for the consultation, that they were treated with dignity and respect and all would recommend the service to family and friends.

61% of patients found the procedure as comfortable as expected or more comfortable than expected. 14% did not have any prior expectations and 19% found the procedure less comfortable than expected.

91% of patients agreed that they would be willing to undergo the same procedure in the same setting.

Conclusions

The results of this survey were overwhelmingly positive. Areas for improvement include;

- * ensuring all women are given a patient information leaflet in an accessible format.
- * Improving ease of finding the department through clearer instructions and better signposting
- * Reducing waiting times to a minimum
- * Finding ways to reduce the experience of discomfort

Overall this large sample shows that women are having a very positive experience of outpatient hysteroscopy at our unit. Surveys such as this from an important way to include patient participation in service development.

Struma Ovarii: management of a rare ovarian tumour in different clinical presentations

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Background

Struma ovarii is a rare ovarian tumour that represents 0.5%–1.0% of all ovarian tumours (1) and 3% of all mature teratomas (2). It is the most common form of monodermal teratoma and is characterised by the presence of macroscopically and histologically detectable thyroid tissue containing variable-sized follicles with colloid material (2). Struma ovarii is mostly a benign lesion. Malignant struma ovarii is usually of low malignancy and low metastatic potential (3). Herein we report three benign struma ovarii cases with different clinical presentations.

Methods

Case 1: 39 years old G0 woman was admitted with a palpable abdominal mass. Gynecological examination revealed a bilobulated 16 cm cystic mass. Laparoscopic evaluation revealed a jelly cystic mass. The cyst was excised from the surrounding healthy ovarian tissue to preserve fertility. The histopathological evaluation of the bilobulated cyst was struma ovarii. In giant ovarian cysts, preservation of the ovary and surgery by laparoscopy needs expertise and might be surgically difficult.

Case 2: 29 year-old, G2P2 woman was admitted with acute abdominal pain and nausea. Ultrasonographic examination revealed a 10x5 cm cystic mass accompanied by a 1.5x1.5 cm cystic mass in the left ovary. Laparoscopic excision of the cysts was performed and histopathological evaluation revealed that the larger cyst was simple serous cyst while the smaller one with a jelly content was struma ovarii. More than one benign tumor in an ovary and combination of epithelial and germ cell tumors is a rare condition.

Case 3: 50 year-old, G7P5 postmenopausal woman was admitted for incisional hernia. Ultrasonography revealed a 13x10 cm complicated cystic mass in the left ovary. Abdominal computerized tomography reported a cystic mass in the left ovary. The patient underwent laparotomy for accompanying medical issues disabling laparoscopy. Total abdominal hysterectomy and bilateral salpingo-oophorectomy were held. Histopathological evaluation as frozen section and conventional evaluation revealed struma ovarii in the left ovary.

Results

Struma ovarii is a rare ovarian tumor, categorised as monodermal teratoma of the ovary. As presented here, preoperative tumour markers such as Ca 125 are usually of no diagnostic value but might be high especially in cases with ascites (2). Also, radiological imaging has limited value in preoperative evaluation (2). The diagnosis is usually made through the operation via frozen section or after final histopathological evaluation of the specimens.

Conclusions

The management should be planned according to the age, fertility desire, menopausal status of the patient and malignancy potential of the lesion. Laparoscopic cystectomy and salpingo-oophorectomy are alternative surgical approaches for benign lesions while radical surgical staging is suggested for malignant form of the tumor (4) who constitute 5-37% of all cases (5).

Desmoid tumours intercepting the obstetricians and gynaecologists' way

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Background

Desmoid tumors are fibrous neoplasms originating from the musculo-aponeurotic structures throughout the body. They most commonly appear in women during or after pregnancy, and regress during menopause. They usually present with abdominal swellings, with or without pain, and are diagnosed on the basis of clinical examination and radiological investigations. The relevance of desmoid tumours to the obstetricians, and the minimally invasive gynaecologist, is that they can be mixed up with other obstetrical and gynaecological conditions as we present in these 2 cases.

Methods

The first case was a 30 years old lady, G3P2 previous 2 caesarean sections (CS), who first presented at 15 weeks of gestation, with abdominal pain. On examination, a tender left pelvi-abdominal mass was identified that was confirmed by ultrasound scan (USS) as an 11x7.7 cm subserous myoma, further confirmed by MRI. The patient was conservatively managed with serial USS showing size progression up to 17x12 cm at 38 weeks. Elective CS was planned, with anticipation of the possibility of CS myomectomy to be done. Surprisingly, the mass was found to be arising from within the abdominal wall itself, namely the rectus muscle, distorting the anatomy, and hindering the access to the uterus. The mid-line incision was extended supra-umbilically, and delivered, then incised at the lower segment to deliver the baby. The parietal mass was then excised with a safety margin, and the abdominal wall closed by delayed absorbable suturing, closing the dead space. The second case was a 54 years old post-menopausal lady, who presented with progressive abdominal pain and swelling over a period of one year. Both examination and MRI scanning suggested a desmoid tumour. She was planned for surgical excision, that was performed, with a safety margin too. Both samples were submitted for histopathological examination.

Results

Histopathology of the samples confirmed the first to be a desmoid tumour, removed with adequate safety margin, whereas the second was surprisingly a rhabdomyosarcoma (RMS) of the rectus muscle. RMS is an aggressive and highly malignant form of cancer that develops from skeletal (striated) muscle cells that have failed to fully differentiate. The vast majority of cases occur below the age of 18. RMS can occur in any site on the body, but is primarily found in the head, genitourinary tract, genitals, and extremities. The 5 years survival rate varies between 35% and 95%, so clear diagnosis is critical for effective treatment and management. Unfortunately, accurate and quick diagnosis is often difficult.

Conclusions

Desmoid tumours may bintercept the obstetricians and gynaecologists's ways along different scenarios. It is important for them to have awareness about this pathology and its differential diagnoses so as to be able to manage/refer appropriately and timely.

Laparoscopic entry complicated by an adherent Meckel's diverticulum at the umbilicus: a case report and discussion of this unusual finding

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Background

Laparoscopic surgeons aim to achieve safe laparoscopic entry, whether by open or closed entry techniques. The incidence of bowel damage at laparoscopy is 0.4-0.6%, with the greatest risk encountered upon Veres or primary trocar insertion. The risk of adherent bowel at the umbilicus can be up to 23% following previous surgery with low transverse incision. Meckel's diverticulum is the most commonly occurring congenital malformation of the small bowel, occurring in 1-3% of the population, and describes a true diverticula of all three layers of the small intestine. When Meckel's diverticulum is present, it is located in the distal ileum, within 100cm of the ileocaecal valve. It is thought to affect both males and females with equal frequency. It usually presents as a pathology with symptoms of obstruction in children or mimicking acute appendicitis. However, many patients, particularly females, are asymptomatic, and therefore it is rare to visualise a Meckel's diverticulum in gynaecological surgery. Our case explores a rare finding of Meckel's diverticulum complicating laparoscopic entry for gynaecological surgery.

Methods

We describe a case of incidental finding of a previously asymptomatic long Meckel's diverticulum, adherent to omentum at the umbilicus, which was discovered during failed laparoscopic entry for an ovarian cystectomy.

Results

Case report: A 38 year old female attended for elective laparoscopic ovarian cystectomy, following a several month history of intermittent right iliac fossa pain, and an ultrasound finding of a 7cm right-sided simple ovarian cyst. She had a history of two previous caesarean sections. Veres entry was commenced with satisfactory entry pressure of 5mmHg, and pneumoperitoneum of 25mmHg CO₂ insufflation achieved. The primary trocar was inserted with visualisation of only omentum at the base of the trocar. The trochar was removed, and omental adhesions were palpable through the rectus sheath opening. Palmer's point entry was undertaken, revealing a blind-ending loop of small bowel adherent to omentum at the umbilicus, with visible persistalsis. There was no apparent damage to the bowel, which was identified as a Meckel's diverticulum. The intended elective gynaecological surgery was performed, and the General Surgeons elected to leave the embryological remnant in-situ. The patient was discharged home with safeguarding advice regarding the signs and symptoms of small bowel obstruction.

Conclusions

Meckel's diverticulum is a relatively rare embryological remnant which can complicate safe laparoscopic entry in the same was as any other segment of bowel that has become adherent at the umbilicus, following previous laparotomy. Alternative route of entry and exclusion of bowel damage is necessary. However, there is debate as to whether a previously undiagnosed and asymptomatic Meckel's should be removed to prevent future sequelae. This case serves to highlight this rare encountered anatomical variant and its laparoscopic appearance, to aid future recognition and management by laparoscopic surgeons.

A retrospective study of 178 cases underwent laparoscopic myomectomy for infertile women

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Background

Recently, the ages of women desiring pregnancy are advancing in Japan, thus the ratios to suffer from myoma are increasing. We have ever performed many laparoscopic myomectomies (LM) for those infertile women. Postoperative fertility and perinatal risks are becoming great matter of concerns, although the factors influencing pregnancy outcomes remain to be elucidated. We aimed to clarify factors influencing postoperative fertility and perinatal outcomes after LM.

Methods

We designed retrospective study. 178 infertile patients who underwent LM at our university hospital from 2010 to 2014 are collected. We investigated factors influencing postoperative fertility (age, count of enucleated myomas, diameter of enucleated largest myoma, location of largest myoma and preoperative embryo cryopreservation before LM) and perinatal outcomes (miscarriage, preterm birth, uterine rupture and placenta percreta) at least 1-year follow-up. Postoperative conception was permitted at 6 months after LM at our institution.

Results

Of 178 cases, 99 cases (55.6%) got pregnant (spontaneous: 53 case, ART: 46 cases) and 79 cases (44.4%) did not achieve conception (spontaneous: 65 cases, ART: 14 cases). Cumulative pregnancy rate at 1-year, 2-year, and 3-year after LM was 26.4%, 48.4% and 55.9%, respectively. Spontaneous pregnancy rate was gradually decreasing over 35 years old, whereas, pregnancy rate in ART was relatively favorable under 42 years old. In spontaneous cases, age at LM (OR 0.79, 95% CI 0.66-0.94, $p < 0.0001$), count of enucleated myomas (OR 1.06, 95% CI 1.00-1.13, $p = 0.04$) and diameter of enucleated largest myoma (OR 1.27, 95% CI 1.04-1.54, $p = 0.02$) contributed for achieving conception. In ART cases, age at LM (OR 0.79, 95% CI 0.66-0.94, $p = 0.006$) and the presence of preoperative embryo cryopreservation (OR 5.02, 95% CI 1.99-12.7, $p = 0.0006$) contributed for achieving conception. Of 74 pregnancies who delivered at our university hospital, frequency of miscarriage and preterm birth was comparable with general population of their age. There were no cases of uterine rupture, however, 3 cases who were enucleated large number of myomas suffered placenta percreta.

Conclusions

LM is effective intervention for infertile women to provide suitable environment for implantation, however, surgical indication should be determined carefully with consideration of patient age, pregnancy plan and perinatal risks. We considered that combination of LM and preoperative embryo cryopreservation might help increasing pregnancy rate.

A case of aggressive angiomyxoma of the uterus

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Background

Aggressive angiomyxoma (AAM) is a rare soft tissue tumor, which occurs predominantly in vulvo-vaginal, perineal and groin region, and the diagnosis is made by histopathology examination. AAM is a slow-growing mesenchymal neoplasm with a marked tendency for local recurrence, but with a low tendency to metastasize. Most of the cases reported have been in women (female-to-male ratio of 6:1) at reproductive age, but these data come from case reports, with approximately 350 known cases. We reported a case of angiomyxoma of the uterus; a very rare form of AAM. As far as we know this was the first case of uterine AAM in the literature.

Methods

A 48-year-old woman with gravida 2, para 2 was referred our clinic with heavy menstrual bleeding. In transvaginal ultrasonography, 2 cm in diameter, type 1 submucous myoma was detected and hysteroscopic myomectomy was planned. After the operation, the patient was discharged on the first postoperative day. On histopathology, the AAM was detected which composed of spindle and stellate-shaped cells in a myxoid stroma. Immunohistochemically, tumoral cells show immunoreactivity for specific vimentin, estrogen receptor (ER), progesterone receptor (PR), CD34, smooth muscle actin and show focal desmin positivity There are immune-negativity for S100 protein, pan-cytokeratin and epithelial membrane antigen (EMA). The patient was evaluated with the oncology department and no metastasis was detected. Detailed information about AAM was given to the patient. Although AAM has very rare metastasis ratio, due to its locally aggressive nature, total laparoscopic hysterectomy was planned. In addition, salpingo-oophorectomy was added because of the ER and PR positivity. The operation was performed and patient discharged on the second postoperative day and no complications were occurred.

Results

AAM pathogenesis is unclear, but some claim that primitive multipotent mesenchymal cell of the lower female genital tract that has the capability of differentiating by various ways gives rise to the AAM. In addition, AAM has no specific symptoms and mostly mis-diagnosed particularly in the pelvic and perineal regions as a Bartholin gland cyst, vulvar abscess, lipoma, or hernia. The histopathology exam is the gold standard diagnosis and we all need to keep in mind the diagnose of AAM and get biopsies in suspicious lesions. But like in our case, diagnosis can be done incidentally without any particular symptoms.

Conclusions

Considering its locally aggressive nature, appropriate management and long-term follow-up is necessary; we follow-up the patient with the oncology department according to their recommends.

Neonatal Uterine Bleeding as a precursor in adult endometriosis

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Background

Endometriosis predominantly as subtle lesions, has been documented soon after menarche and even in pre-menarcheal girls, may have a pathogenesis that differs from retrograde menstruation. It is postulated that progenitor stem cells present in shedding endometrium may have a role in the pathogenesis of early-onset endometriosis through retrograde neonatal uterine bleeding.

Methods

The frequency of Neonatal uterine bleeding was prospectively evaluated among 4 maternity hospitals, in the town of Tbilisi in Georgia between October 1st 2016 until April 1^s 2018. Midwives, nurses and pediatricians following these neonates were informed and participated in the study registering any NUB events and informing the study chief investigator (LT). In addition all NUB cases were followed by telephone direct communication with the mothers' newborns during the 10th post-partum day for verification of absence or presence of NUB.

In addition, during the same time period, 136 women visited our clinic with histopathological confirmed diagnosis of endometriosis after laparoscopy due to infertility or pelvic pain, consented to participate in a survey study of NUB. Only patients that their mothers firmly remembered their daughters as newborns able to report about NUB status were included in the study. A structured questionnaire regarding the age, type of conception, family and medicine history, history about endometriosis and adenomyosis, etc were reported in details by both study groups.

Results

During the 18 month of study period 3188 female neonates were examined and followed for their first 10 days of life for NUB. Only 43/3188 neonates 1.3% were diagnosed with NUB and only 6 mothers 14% had established endometriosis. Out of the 136 patients with endometriosis only 2 had NUB 1.4% as reported by their mothers.

Conclusions

The incidence of NUB in the area of Tbilisi is 1.3%-1.4%. According to our retrospective analysis, 14% of mothers delivered newborns that developed uterine bleeding have been diagnosed with endometriosis prior to their pregnancy.

Pregnancy rates after laparoscopic treatment of minimal or mild endometriosis

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Background

Minimal and moderate pelvic endometriosis is frequently diagnosed in infertile women. Ablation of the endometriosis lesions often improves fertility potential by 50-70%. A retrospective evaluation of the pregnancy rate (PR) of infertile women diagnosed and treated by laparoscopy for endometriosis is presented

Methods

January 2012 to July 2017, 704 infertile women, age 21 to 41, with excluded male factor, underwent laparoscopy and methylene blue dye test evaluating tubal patency and staged for minimal or moderate endometriosis according to rASRM classification. Women with minimal endometriosis were treated by ablation of the visible lesions using bipolar diathermy. Patients with moderate disease underwent excision of the endometriosis implants using scissors and bipolar probe for haemostasis. The PR and time from surgery to spontaneous conception was evaluated.

Results

Among 704 laparoscopies performed, 337 (48%) of minimal or moderate endometriosis were diagnosed and confirmed by histopathological biopsies. Bipolar ablation of the endometriotic lesions was performed in 220 cases while in 87 patients excision of the endometriosis implants was necessary. Concomitant pathologies were noted, 22.3% had fibroids, 10.5% endometrial polyps, 10.1% adhesions. Subtle lesions like Morgani tubal cysts were found in 45.2% and cervical polyps in 12.5% of the cases. Among all patients with confirmed patent tubes 69/202 (34%) treated for minimal endometriosis and 53/114 (45%) with moderate disease had a spontaneous pregnancy within 40 weeks after operation. The overall PR after spontaneous conception up to 12 months post operatively was (69/220) 34.2% for the minimal endometriosis treated by ablation, and (53/117) 45.3% for the moderate disease, endometriosis implants treated by excision

Conclusions

The significant difference in PR, after spontaneous conception, between the 2 treatment groups, probably reflects the difficulty to occasionally distinguish between minimal and moderate endometriosis and consequently under treatment of the disease.

Interstitial ectopic pregnancy - laparoscopic management using basic skills

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Background

Interstitial pregnancy is a rare form of ectopic pregnancy (accounting for up to 2% to 4%). It arises when implantation occurs in the 1-2 cm interstitial portion of the proximal fallopian tube, within the myometrium. The frequently missed diagnosis poses a diagnostic and therapeutic challenge, with a significant increased risk for maternal morbidity and mortality (range of 2.0% to 2.5%). Due to the abundant blood supply from both uterine and ovarian vessels rupture of interstitial pregnancy may result in life-threatening internal hemorrhage. Both medical and surgical management have been reported. Although laparotomy hysterectomy and cornuectomy used to be the preferred surgical approaches, over the last 2 decades more cases are being managed with less-invasive techniques through laparoscopic cornuostomy or cornuectomy. The main concern with surgical treatment is hemorrhage and the need for cornual reconstruction, which necessitate advanced laparoscopic skills. The objectives were to report our experience with laparoscopic management of recurrent interstitial pregnancy using basic laparoscopic technique.

Methods

Case report and literature review.

Results

Case

27 year old G5P1 woman at 6+0/40 was admitted due to abdominal pain and free fluid in the Pouch of Douglas seen on transvaginal ultrasound scan. No vaginal bleeding present. Elevated human chorionic gonadotropin level at 41,788 IU/mL. History of previous laparoscopic salpingectomy due to right tubal ectopic pregnancy in 2007. Upon admission she became haemodynamically unstable and emergency laparoscopy was undertaken. *Diagnostic laparoscopy confirmed right sided interstitial pregnancy* which was misdiagnosed pre-operative by the initial ultrasound scan.

Laparoscopic management

Procedure performed under general anaesthetic, with three laparoscopic ports (10 mm infra-umbilical two 5 mm lateral ports). Initial a massiv hemoperitoneum was presented, overlying organised clot with blood in the Pouch of Douglas. After evacuating 2000 cc blood from her abdomen a ruptured right interstitial pregnancy was diagnosed. Removal of remaining products of conception and the area of bleeding coagulated with bipolar cautery. To secure hemostasis and achieve local compression two layers of an absorbable haemostat hemostatic agents were used. No need to convert to laparotomy during treatment in this unexpected case of interstitial pregnancy. Blood transfusion was given during surgery (Hb 3,8 mmol/l; Hk:0.17). Discharge on post operative D3, with an uncomplicated recovery. Her serial serum human chorionic gonadotropin levels were followed until complete resolution a few weeks later.

Conclusions

- In spite of all diagnostic modalities the identification of a interstitial pregnancy remains a difficult task and rupture will still be encountered from time to time. Hence surgeon with basic laparoscopic skills might have to deal with such a case unexpectedly.
- We present that by using simple technique as bipolar cautery and hemostatic agents satisfactory haemostasis is achievable in a case of early ruptured right interstitial pregnancy. Therefore laparoscopy can even be considered with basic laparoscopic skills.

Outpatient hysteroscopy has led to a positive change in our culture, allowing us to deliver both diagnosis and treatments within a dedicated and caring surrounding.

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Background

Outpatient hysteroscopy is a diagnostic procedure designed to elicit causes of endometrial pathology provided in a predominantly ambulatory care setting. The change in culture and shift from procedures being performed in a conventional day case theatre environment has created the opportunity for other diagnostic procedures and treatments to be fitting for this environment. The study aims to assess the influence of a change in culture upon the services delivered and to evaluate the efficiency of our systems.

Methods

To engage with the Norfolk and Norwich University Trust's 'Excellence Together' programme, with a focus on improvement and change methodology within an outpatient setting. Retrospective data between January and August 2017 was analysed to assess the systems in place to establish any capacity issues, the stability of waiting times, inappropriate referrals, diagnosis and treatment opportunities to reduce the number of patient visits.

Results

The introduction of a outpatient hysteroscopy service in 2009, today accounts for more than 90 % of all hysteroscopies performed within the hospital.

Referrals can be made directly from GP's, gynaecology clinics, post - menopausal clinics and via emergency admission. Of these referrals, postmenopausal patients account for approximately 32%, menorrhagia patients 28%, intermenstrual bleeding 22%, with 15% equating to intrauterine coil problems and the remaining 3% to other reasons.

The current utilisation of the procedure suite is divided as; 35% outpatient hysteroscopy, 30% outpatient procedures, myosure fibroid morcellation, polypectomy, novasure ablation with 5% of available capacity designated to the urogynaecology team to provide a cystoscopy and botox instillation procedure clinic. Following a successful trial of 10 patients, a pathway of care for patients seeking manual vacuum aspiration is also in progress, an option for patients requiring treatment for management of early miscarriage without needing a general anaesthetic.

Analysis of patients referred inappropriately, identified trends in relation to inadequate histology upon pipelle biopsy, indefinite assessment and inability to perform endometrial pipelle biopsy, suggesting that 23% of patients could be offered a different pathway of care.

Clinic appointment utilisation ranged from between 77% and 96%, recognising a variance between weekly clinic availability and unfilled capacity.

The average waiting time for hysteroscopy also appears variant week to week from 18 days to 48 days.

Conclusions

A renewed approach to optimise capacity and a redesign of clinic templates that can reflect the variance in clinical need means the unit can aim to be consistently achieving above 90% capacity. With a measurable approach to monitor waiting times to ensure that there is a stable, sustainable service at all times.

The expansion of gynaecology diagnostic procedures and treatments within an outpatient setting has required a gradual culture change. This has heightened awareness and consideration of the resources available within an adapted clinical environment to ensure that open communication with patients is within a caring, supportive, safe environment.

Smooth uterine muscle of uncertain malignant potential (STUMP) and IVF treatment in infertile woman

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Background

The term smooth uterine muscle of uncertain malignant potential (STUMP) indicates a group of uterine smooth muscle tumours that cannot be diagnosed unequivocally as malignant or benign according to WHO. Diagnosis, surgical management, and follow-up of this neoplasm remain controversial, especially in pre-menopausal women who desire fertility, due to the nonaggressive behaviour and prolonged survival as compared to leiomyosarcomas. However, recurrence is estimated between 8.7% and 11% and may include delayed-recurrences. We report a case a woman treated for infertility who presented with an asymptomatic cervical mass, diagnosed as STUMP after 3 IVF attempts

Methods

A 39 G0P0 WF patient had been treated for infertility for the past two years. She underwent 3 cycles of controlled ovarian stimulation (COS) (short protocol) with 300 IU of gonadotrophins and 2 embryo transfer with no success due to poor ovarian response. The patient presented for evaluation prior to her fourth attempt. A transvaginal ultrasound on day 3 was performed as usual and revealed a 5 cm cervical asymptomatic mass with possible diagnosis of leiomyoma. MRI images confirmed the finding. The patient underwent laparoscopic evaluation which confirmed the presence of a smooth well defined mass attached to the left side of the cervix which was removed. Frozen section was negative for malignancy.

Results

The final histological examination showed moderate nuclear atypia without necrotic areas or mitotic activity (p53 [-], Caldesmon [+], p16 [-]) compatible with STUMP. The case was reviewed by the tumor board of our institution and no additional surgical treatment was suggested. Five months after surgery the patient remained recurrence-free of disease.

Conclusions

There is no data in the literature regarding the influence of COS with gonadotrophins on the development of STUMP in infertile women. The uncertain risk of malignancy and the lack of standardised management, complicates the decision process, especially for women that may require additional fertility treatments.

<https://player.vimeo.com/video/269926680?autoplay=1>

Successful surgical management of tubal stump ectopic pregnancy

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Background

To present a rare case of a tubal stump ectopic pregnancy.

90% of ectopic pregnancies are located in the ampulla of the fallopian tube. The incidence of recurrent ectopic pregnancy is approximately 8% of women after salpingotomy and in 5% of women after salpingectomy. The frequency of tubal stump pregnancy is approximately 0.4% of all pregnancies, with fewer than a dozen cases documented in English literature over the last ten years.

Methods

The patient was a 27 year-old woman, gravida two, nulliparous, with previous laparoscopic salpingectomy for left tubal pregnancy in July 2017. She has no remarkable past medical history or family history of note. She presented to the early pregnancy unit with a positive pregnancy test, at six weeks and three days gestation for a reassurance scan. She had no abdominal pain or bleeding. On transvaginal ultrasonography, uterus was empty with homogenous texture and an endometrial thickness of 1.6cm, with no gestational sac detected. Gestational sac with yolk sac, fetal pole and fetal heart beat was noted, the mass measured 2.56cm x 2.01cm x 2.40cm, with corpus luteum noted on the same side. There was no free fluid in the pouch of douglas. The level of human chorionic gonadotropin (hCG) in the patient's blood was elevated to 33819IU/L. She was haemodynamically stable with a haemoglobin level of 110g/L. Based on these examinations, ectopic pregnancy was strongly suspected. Due to the presence of a fetal pole and fetal heart rate, the patient was suggested to undergo laparoscopic surgery.

Results

Laparoscopy with general anaesthesia was performed. Intra-umbilical opening with laparoscopic optics had been introduced and one accessory port in the suprapubic region. Uterus, both ovaries and right tube appeared normal. Ectopic pregnancy was found in the left tubal stump, and we diagnosed it as a tubal stump pregnancy, this was confirmed on histopathology.

Conclusions

The operation method for a tubal stump pregnancy is almost the same as that of an interstitial pregnancy. The difficulty level of laparoscopic operation for interstitial and tubal stump pregnancy is higher than that of a common laparoscopic salpingectomy. Selection of operative method should depend on the surgeon's experience, preference and expertise. There are several reports of successful laparoscopic operation for interstitial and tubal stump pregnancy by injecting diluted vasopressin into the uterus and using an advanced bipolar device to remove the ectopic.

Mucinous cystadenoma: Laparoscopy vs laparotomy experience from a single center

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Background

Mucinous cystadenomas account for %8-25 of all ovarian tumours. Mucinous cystadenomas usually represent as large multiloculated cystic mass with mucus containing fluid. Ultrasound and computerized tomography are commonly used for diagnosis. Magnetic Resonans Imaging (MRI) is also used when there is suspicion. Therapeutic surgery with laparoscopy or with laparotomy is administered for definitive diagnosis and treatment.

Methods

We retrospectively analyzed our pathology records for the patients diagnosed with benign mucinous cystadenoma within the last 4 years. At admission complex adnexial mass was observed at ultrasonography and further radiological evaluations were completed before surgery. The mean diameter of the mass was 10.38 ± 6.22 cm. In all cases, preoperative CA 125 and CA 19.9 values were within the normal range. There were 14 patients who were aged between 28 and 60 years. Mean age of the patients was 39.21 ± 11.32 years. Three cases were postmenopausal. Mean diameter of the cyst was 13 ± 6.24 in postmenopausal patients while it was 9.6 ± 6.32 cm in the reproductive age group. Laparoscopy (L/S) was performed in 7 (50%) patients and 7 (50%) patients underwent laparotomy (L/T). Main reasons for performing L/T were intraabdominal dense adhesions due to previous surgery, giant masses, recurrent mucinous cystadenoma, suspicion of malignancy, cystic fluid spillage and other medical conditions disabling L/S. Cystectomy was performed in 42% of the cases (n=6, five in L/S and one in L/T group). 57% of the cases (n=8) had ooforectomy. Ooforectomy was more commonly performed in cases requiring L/T (n=6), as these were recurrent cases (n=2) and giant masses (n=4).

Results

The analysis of the data indicates that laparoscopy is not always feasible for mucinous cystadenoma. Although benign at histopathology, the behaviour pattern of this tumour might be different. Recurrences, accompanying dense adhesions, cystic fluid spillage and giant masses are some of the recorded causes for a L/T. In addition, even if preservation of the healthy ovarian tissue rather than ooforectomy is preferred approach in pre-menopausal cases, ooforectomy is most commonly applied for the above mentioned causes

Conclusions

As a result, preoperative consultation with a patient suspicious for musinous adenoma would rather include the possibility of conversion to laparotomy, ooforectomy and recurrences when cystectomy is feasible.

Retrospective analysis of use of ESMYA [ulipristal acetate] at an university teaching hospital over a 18 month period

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Background

Ulipristal acetate (UPA), marketed as Esmya®, is selective progesterone-receptor modulator that prevents ovulation and induces amenorrhoea. How does it work? In vitro studies have found that cultured fibroid cell growth is prevented by inducing apoptosis and inhibiting cell proliferation. Randomised controlled trials have shown UPA decreases fibroid size as well as reducing menstrual bleeding and inhibiting ovulation. On 9 February 2018 the Medicines & Healthcare products Regulatory Agency (MHRA) advised of new temporary safety measures for Esmya (ulipristal acetate) following reports of serious liver injury in women using the medicine for uterine fibroids.

Methods

UPA was given to 33 patients who had uterine fibroids presented with various symptoms like heavy periods, pelvic pain and abdominal mass. We analysed the data taking account of their age, location of fibroids, indications, change in the size of fibroids following use of UPA and their LFTs following MHRA regulations.

Results

Majority of our patients were aged below 50[88%] and more than 50% of them had multiple fibroids. More than 80% of them had either submucosal or intramural fibroids. 75% of them had heavy periods, 12% had pelvic pain and rest were given as a preoperative measure to reduce the fibroid size.

We requested all of them to have blood tests for liver function tests done and 25 patients [75%] of them had them done by the time we analysed this data. Only 4 of them had abnormal LFTs where we noticed slight increase in transaminase levels above the normal range. None of them were had any symptoms or signs of liver damage

Conclusions

An EU-wide review of Esmya was started in December 2017 following four reports of serious liver injury (in three cases necessitating liver transplantation) in women using UPA. Though we could say that none of our patients had any serious liver injury following use of UPA for fibroids, ours is a small study to suggest its reintroduction.

Management of patient with highly vascular retained products of conception

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Background

A 30 year old nulliparous was seen in the early pregnancy unit with PV spotting. LMP was unsure with B HCG of 90 and progesterone level of 13.3. The diagnosis was pregnancy of unknown location. The patient was followed up with HCG levels which did decline gradually and finally the urine pregnancy test was negative. Her scan during her pregnancy revealed thickened endometrium of 20mm with a very high vascularity – tubular in appearance extending towards the myometrium. Differential diagnosis of AV malformation was considered and plan was to repeat the scan once pregnancy test is negative.

Repeat scan showed similar picture and a decision was made for hysteroscopy and removal of retained products of conception either with suction evacuation or MyoSure resection. At hysteroscopy bluish tortuous structure was seen at fundus and right lateral wall ?AV malformation. Even before a suction evacuation could be attempted patient started bleeding significantly. A 10mls foley catheter was inserted into the uterus and uterotonic agents such as oxytocin and misoprostol were given along with 1gram intravenous tranexamic acid. The patient was kept overnight in the hospital and catheter was removed the next morning and the patient was discharged home. A repeat imaging has been planned for further evaluation of endometrium.

Methods

Case report

Results

Cases of retained products of conception with marked vascularity can present a clinical challenge because simple dilation and curettage can lead to life-threatening haemorrhage. Acquired uterine arteriovenous malformations is a rare cause of vaginal bleeding and can occasionally be confused with retained products of conception or sometimes retained products of conception can masquerade as acquired arteriovenous malformation in imaging. Both can be associated with marked myometrial vascularity.

Conclusions

The management should take into account hemodynamic status, degree of bleeding, patient age and desire for future fertility. Uterine artery embolization can be considered as a safe and efficient first line treatment. Sometimes a further procedure may be needed to evaluate RPOC even after successful UAE. If the amount of vaginal bleeding is small then expectant management can be instituted with a repeat ultrasound. A dilation and curettage can be done either under ultrasound guidance or hysteroscopy once there has been a reduction of the vascularity of RPOC.

References

Uterine artery embolization for retained products of conception with marked vascularity: A safe and efficient first line treatment 2017 *Cardiovasc Intervent Radiol* Apr;40(4):520-529. doi: 10.1007/s00270-016-1543-7. Epub 2016 Dec 21

Bazeries; Paisant Thouveny

Laparoscopic box training with four different modules in a tertiary education and research hospital, Ankara, Turkey

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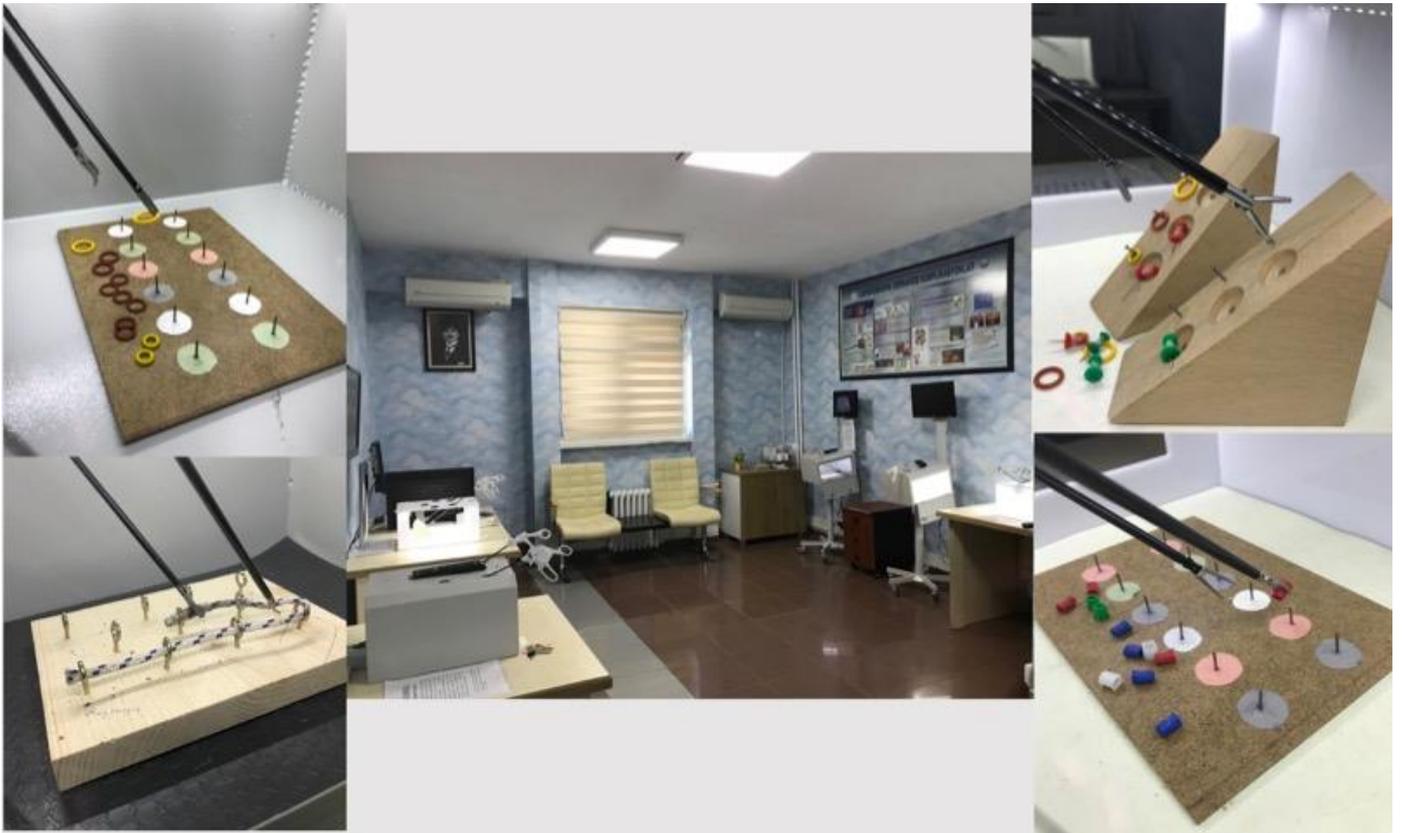
Background

Laparoscopic surgery (LS) has had a fundamental role in gynecology over the past 2 decades, and has obtained a major position within surgical specialties. Because laparoscopic surgery is now widely accepted, training the residents to perform laparoscopic procedures is essential. Therefore, simultaneously, the interest in training programs to teach technical skills is gaining ground rapidly. Currently, no standardized evidence-based training program has been accepted for teaching gynecology residents the laparoscopic surgery.

Methods

For LS, psychomotor and hand-eye coordination skills are of great importance. To learn these skills, effective preclinical simple box trainers have been developed. In the light of the data, we created a well-designed LS training room, and arranged four different modules. Here, we would like to present our hospitals' LS training room and box trainers, and also indicate the importance of these training activities in residents' education.

Results



LS training room design and box trainers are shown in **Figure 1**. In Training Module (TM) 1, the surgeon should attach the rings to the nails with paying attention to their colors and sizes. In this process, the surgeon should also change the rings between the right and left hands (**Figure 2**). TM 2 is presented in **Figure 3**. In this TM; the surgeon should place the pins in wooden hollows with paying attention to their colors. In this process, the surgeon should firstly pick the pins up from their color parts, then change them between the right and left hands via holding the needle part. In

TM 3, the surgeon should attach the small plastic pipes to the nails with paying attention to their colors (**Figure 4**). In **Figure 5**; TM 4 is presented: the surgeon should pass the rope through the metal rings with the help of both hands. The direction should be from left to right and down/up to up/down.

Conclusions

In our opinion, for developing the effective and complete laparoscopic training programs, these integrated modules can be a practical answer. All these training modules improve the laparoscopic skills, and training with a virtual reality simulator or box trainer should be considered before actual laparoscopic procedures are carried out. Therefore, it should be kept in mind that, laparoscopic training hospitals should coordinate a laparoscopic training room that includes a traditional box trainer or both with box trainers and a virtual reality simulator.

Unusual complication following endometrial ablation

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Background

A 51 year old was seen in specialist clinic for menorrhagia and dysmenorrhoea. She had a significant surgical history which included emergency caesarean section in 2002 for twins followed by a laparoscopic cholecystectomy for gallstones which was complicated with liver injury and therefore she was hospitalized for 5 months. She then needed a partial resection of liver by a laparotomy in 2008. She also had an apronectomy in 2012. Her BMI was 33. She was very keen for total abdominal hysterectomy and bilateral salpingo-oophorectomy. She was counselled to have conservative procedures in the form of mirena insertion or endometrial ablation in view of significant past surgical history. She finally agreed to proceed with NovaSure endometrial ablation.

Hysteroscopy showed small benign looking polyp arising from the left lateral wall of uterus which was resected with MyoSure followed by straightforward NovaSure endometrial ablation.

She presented to accident and emergency 17 days postop with abdominal pain mainly on the left side. She had ongoing vaginal discharge which can be expected post ablation. She already received 2 courses of antibiotics. The inflammatory markers were normal. The renal function tests were normal. She was commenced on IV antibiotics as a prophylactic measure. A CT abdomen/pelvis was done which showed left hydronephrosis and the left ureter to be dilated until the level of the sacrum where there is an abrupt transition in calibre of the left ureter.

Methods

Case report

Results

She was reviewed by the urology team and a CT urogram was done which confirmed similar findings. At this point the possibility of ureteric injury caused by endometrial ablation was raised. The consultant gynaecologist who performed the procedure contacted NovaSure company who reported no case reports of ureteric injury caused by endometrial ablation. The CT images were reviewed in detail by the radiologist who suggested a periureteric lesion which might be a lymph node or focal retroperitoneal fibrosis causing ureteric obstruction. She was seen by the urology team and retrograde pyelography showed stricture in the distal third of left ureter and therefore a left ureteric stent was inserted and the patient was discharged.

Conclusions

The immediate complications associated with Novasure endometrial ablation include uterine perforation, infection/sepsis, fistula/sinus, cervical stenosis, cardiac arrest, bowel injury. Complications reported infrequently with endometrial ablation are urinary tract injuries, immediate hysterectomy, gas embolism. The incidence of such complications is unavailable as the total number of cases is unknown. It appears that in this instance, possible explanations for the complications could be inflammation of regional lymph nodes causing the obstruction or fibrosis brought on by the procedure.

Therapeutic hysteroscopy under procedural sedation in an outpatient setting: a comparative cohort study

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Background

To compare therapeutic hysteroscopic procedures under procedural sedation in an outpatient setting to inpatient procedures in terms of procedure time, admission time, complications, pain scores and patient satisfaction. To compare therapeutic hysteroscopic procedures under procedural sedation in an outpatient setting to inpatient procedures in terms of procedure time, admission time, complications, pain scores and patient satisfaction.

Methods

All outpatient hysteroscopic procedures from February 2014 to February 2018 were prospectively included and compared with similar cases in which patients underwent inpatient hysteroscopic procedures in 2012 and 2013. Cases that were included are hysteroscopic morcellation of fibroids, polyps and pregnancy remnants, synechiolysis, the hysteroscopic removal of IUD and endometrial ablation. Patients received a questionnaire to evaluate patient satisfaction.

Results

A total of 450 patients underwent a hysteroscopic treatment under procedural sedation and were compared with 129 patients that received general anaesthesia. Preliminary analysis showed that median time of procedure was 10.0 minutes in the outpatient group compared to 20.0 minutes in the inpatient group. Median admission time was 127 minutes in the outpatient group, while admission time in the inpatient group was 455 minutes. Incomplete procedures occurred in only 2.95% in the outpatient group. Pain scores (VAS-scale) were low, respectively 0.47, 0.03, 1.45 before, during and after surgery, while mean pain score during menstruation was 4.9. Surgical and anaesthetical complications occurred in respectively 1.2% and 2.2%. Results of patient satisfaction are analysed currently but will be presented.

Conclusions

Therapeutic hysteroscopic procedures under sedation were safely executed with a low rate of complications, low pain scores and similar efficiency with shorter procedure and admission time compared to outpatient procedures.

Review of an outpatient treatment hysteroscopy service in a tertiary teaching hospital

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Background

The introduction of small calibre hysteroscopic morcellators has allowed endometrial pathology to be treated in the outpatients department under local anaesthetic, avoiding the need for general anaesthesia. As well as clear benefits to patients, this type of service is advantageous to the healthcare system as it frees theatre capacity. Studies have demonstrated good outcomes, but potential concerns over patient anxiety and discomfort have limited their introduction somewhat, as data on patient acceptance is limited.

Our aim was to review the outpatient treatment hysteroscopy service in our unit, with regards to referral pathways, details of treatments, complications, and patient satisfaction.

Methods

Data was collected prospectively over a 6-month period, including all patients that underwent treatment hysteroscopy in the outpatients department. The operator entered procedure details at the time of treatment, and a patient satisfaction questionnaire was given to the patient to fill out immediately following the procedure. Patients were asked to assess their pain levels during and after the procedure, on a 0-10 visual analogue score.

Results

Fifty-eight patients were listed for treatment over the time period, with a median age of 55 years. Thirty-nine were post-menopausal and nineteen were pre-menopausal. Thirty-four (58.6%) referrals were for post-menopausal bleeding, fourteen (24.1%) for heavy, irregular or post-coital bleeding, and ten (17.2%) for incidental scan findings of thickened endometrium or polyps. Of patients reviewed on the 2-week wait pathway (64.5%), mean time to 1st review was 14 days, and from 1st review to treatment 22 days. For the benign pathway (35.5%), these times were 82 days and 28 days respectively. Treatments were undertaken with the Myosure® device (Hologic®). Fifty-four treatments were successfully completed (93.1%), with four abandoned and subsequently booked under general anaesthetic; three due to patients being unable to tolerate them, and one because of difficulty due to patient habitus. No other subsequent complications were recorded. Histology confirmed forty-five benign polyps/polypoid endometrium, four polyps with atypical hyperplasia, four fibroids, and one endometrioid adenocarcinoma. Thirty-one patients completed feedback questionnaires. The mean pain scores for during and post procedure were 4.1 and 2.1 respectively. All patients but one felt very well informed prior to treatment and would be either likely or extremely likely to recommend the treatment to friends or family requiring similar treatment.

Conclusions

During the data collection period, the majority of treatments were successfully completed. Waiting time for outpatient treatment was shorter than for treatment in theatre under general anaesthetic. Pain scores were low both during and after the procedure, and feedback suggested patients were satisfied. This review demonstrates that outpatient treatment hysteroscopy is a safe and well accepted alternative to general anaesthetic, and should be considered as first line for the excision of the majority of endometrial lesions.

Thoracic endometriosis presenting with catamenial pneumothorax

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Background

Endometriosis affects 10% of women in reproductive age. Thoracic endometriosis is a rare form of extra-genital endometriosis and manifests itself through various clinical presentations.

Methods

To present two cases of thoracic endometriosis with recurrent episodes of catamenial pneumothorax.

Results

CASE REPORT 1

We present a case of a 38-year-old woman, negroid, nulliparous, without smoking habits, who was referred to our gynecological department (2011) with recurrent right-sided catamenial pneumothorax (PNX). The patient had a longstanding history of endometriosis, including previous resection of an umbilical deposit and pelvic endometriosis confirmed by magnetic resonance imaging (endometriosis in the rectovaginal septum, involvement of the sacrouterine ligaments). No symptoms such as dysmenorrhea, dyspareunia, chronic pelvic pain, dyschezia with continuous oral combined contraceptive (COC).

The first PNX episode (2010) was treated with a chest drain. A new episode occurred one year after, which relapsed after tube drainage. A video-assisted thoracoscopic surgery (VATS) was performed and revealed diaphragmatic perforations and absence of pleuro-pneumo adhesions or blebs. A pleurectomy and pleurodesis were performed. The biopsy confirmed pleural endometriosis. In 2013, there was a new episode of right-sided PNX which was treated with pleurodesis, and 4 years after the procedure was repeated because another episode occurred. During this period of time, there was no progression of pelvic disease. If a new episode of PNX occur, gonadotropin-releasing hormone (GnRH) analogs should be considered.

CASE REPORT 2

We present a case of a 37-year-old woman, caucasian, with a previous vaginal delivery, no smoking habits or gynecological symptoms such as dysmenorrhea, dyspareunia, chronic pelvic pain, dyschezia. The patient was taking COC and referred right shoulder pain during withdrawal bleeding. In 2017, she had a catamenial right-sided PNX that was treated with pleurodesis and she started continuous COC. Four months later, a new episode of PNX occurred. A VATS was performed and revealed diaphragmatic perforations and a new pleurodesis was performed. Treatment with GnRH analogue was done for 3 months. The pelvic ultrasound showed no signs of endometriosis and as the patient remained asymptomatic after GnRH analogue treatment, continuous COC was prescribed.

Conclusions

These two cases show that endometriosis has multiple manifestations and requires a multidisciplinary management. The most common procedures to treat PNX are VATS and pleurodesis. Since catamenial PNX has a high risk of recurrence, hormonal suppressive therapy should be considered.

A case of right pelvic side wall exophytic fibroid following laparoscopic myomectomy

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Background

This is a case of a 45 years old lady who presented with a one year history of progressively worsening abdominal pain, bloating and pressure symptoms. She had had four uncomplicated vaginal deliveries and a laparoscopic myomectomy of an eight centimetre fundal intramural fibroid five years ago, involving using a morcellator. Pelvic imaging confirmed a seven centimetre right pelvic side wall exophytic fibroid with a further 5cm recurrent intramural fibroid on the left poster-lateral aspect of the uterus. a repeat laparoscopic surgery was performed to remove the exophytic fibroid from the pelvic side wall and another laparoscopic myomectomy.

Methods

Case report of right pelvic side wall exophytic fibroid following laparoscopic myomectomy.

Results

As above.

Conclusions

Exophytic fibroids are rare and can be a complication of laparoscopic morcellation. There are very few example of such case reports in the literature. This case is a very educational example such a case followed through each mile stone of exophytic development of a fibroid. The images captured during surgery illustrate the appearance of a benign exophytic fibroid and pictured steps of laparoscopic removal of the fibroid are also great resources for surgical experience. Case reports such as this will increase our awareness of the range of complications associated with use of morcellator and enable better informed consent to be taken.

Cyclic and non-cyclic abnormal uterine bleeding. Is there any hysteroscopic difference?

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Background

Abnormal uterine bleeding (AUB) is a common clinical finding and it is frequently followed by an hysteroscopic intervention usually with endometrial biopsy. Our objective with this study was to investigate whether different patterns of bleeding were related with specific hysteroscopic or histopathological findings.

Methods

Retrospective descriptive study reviewing clinical data and histopathological findings of all hysteroscopies performed in Hospital Universitario Principe de Asturias between 2010 and 2017. Two different groups were studied attending to AUB pattern, cyclic or non-cyclic. Women were also stratified according to their menopausal state.

Results

A total of 4009 hysteroscopic explorations were performed during this period, 1975 in women with non-cyclic AUB and 1127 in women who suffered from cyclic AUB. In the group of non-cyclic AUB, there was more postmenopausal patients compared to premenopausal patients: 1192 and 804 respectively. The most relevant hysteroscopic findings were 455 (38.2%) atrophic endometrium and 443 (37.2%) endometrial polyps in the postmenopausal women's group and 316 (39.3%) functional endometrium and 247 (30.7%) endometrial polyps in the premenopausal women's group. Biopsies results were 422 (35.4%) endometrial polyps and 246 (20.6%) atrophic endometrium in postmenopausal women and 238 (29.6%) endometrial polyps, followed by 111 (13.8%) secretory endometrium in the other group. In the group of cyclic AUB, functional endometrium was the most common hysteroscopic finding among the 1106 premenopausal women we analyzed. It was described in 461 patients (41,7%). The second diagnosis in frequency consisted of 270 (24.4%) endometrial polyps, followed by 157 (14.2%) fibroids. Biopsies determined endometrial polyp as the most frequent finding: 305 (27.6%). Other histopathological diagnostics were 180 (16.3%) secretory endometrium, 144 (13%) proliferative endometrium and 121 (10.9%) hyperplasic endometrium without atypia.

Conclusions

Functional endometrium (secretory, proliferative and hyperplasic) represent the most common hysteroscopic finding in cyclic AUB. Atrophy represents one of the most common causes of non-cyclic AUB in postmenopausal women whereas in premenopausal patients, functional endometrium or endometrial polyps sustained the most frequent diagnosis. Nevertheless, hysteroscopic and histopathologic diagnoses are not always concordant. Obtaining endometrial polyp as the most frequent anatomopathological diagnosis in cyclic and non-cyclic AUB either in premenopausal and postmenopausal women. Further investigations are needed to explain these differences.

Hysteroscopic repair of an isthmocele: a case report

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Background

To prove the suitability of hysteroscopic assistance in the surgical approach of a patient with a diagnosis of an isthmocele

Methods

A model patient with an isthmocele was selected for the development of the case. The Pubmed and Uptodate databases were revised. Those clinical studies which raised a hysteroscopy-based treatment for the repair of an isthmocele were selected. Different surgical selection criteria for the hysteroscopic approach of this pathology were studied and analysed.

Results

A 37-year-old woman with a story of previous caesarian scar performed in Rumania was chosen for this case. She first came to Hospital Universitario Príncipe de Asturias (HUPA)'s gynecological consult after years of post-menstrual spotting. A niche at the site of the caesarian section was observed in the ultrasound scan. The hysteroscopic approach was a suitable option in the case of this isthmocele due to its depth of 63 mm and the residual myometrial thickness of 32 mm. The procedure was performed successfully with the resection of the fibrotic tissue of the lower layer, until the underlying muscular coat was exposed. After 2 weeks a noticeable improvement could be objectified not only in the ultrasound scan, but also in the living standard of our patient, due to the disappearance of the post-menstrual spotting.

Conclusions

According to the most recent literature, the hysteroscopic approach of those isthmoceles which fulfil particular criteria -such as at least 3 mm of myometrial residual thickness- is a secure and advisable technique. Regarding to this particular case, this endoscopic technique resulted to be a correct choice and enabled the resolution of this patient's pathology in a safe and effective way.

Delayed hysteroscopic management of retained placental tissue for an anaemic patient who refused blood products

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Background

We wish to discuss the case of a 29 year old who underwent truclear resection of retained placental tissue. As she was anaemic and refused blood products, delayed hysteroscopic resection was chosen as opposed to immediate dilatation and curettage. This allowed for optimisation of haemoglobin levels and avoided long term consequences of uterine curettage.

Methods

This patient had a normal vaginal delivery with a postpartum haemorrhage of 800ml which was managed medically. Her haemoglobin was 94g/L on discharge day 6 following delivery. She was a Jehovah's Witness and had refused transfusion of blood products. She was readmitted day 8 following delivery feeling unwell with fevers and was treated for sepsis. Ultrasound showed a 9x4cm area of retained placental tissue in her uterus. Her haemoglobin on readmission was 82g/L. She was treated with Intravenous antibiotics and consideration was given to performing dilatation and curettage on this readmission. However as the patient responded well to antibiotics it was felt that optimisation of haemoglobin (with intravenous iron and erythropoietin) and truclear resection at a later date was advisable. The patient was reviewed weekly to assess for infection and there was multidisciplinary input including pre-operative counselling, anaesthetic review and completion of an advance directive.

Results

She was admitted 8 weeks postpartum for Truclear resection of retained tissue. Her haemoglobin was 135g/L and intravenous tranexamic acid bolus and infusion were give prior to the procedure. Saline Hysteroscopy was performed by a consultant gynaecologist under general anaesthetic. This showed adherent placental tissue on the right lateral wall and posterior wall of the uterus. The tissue was resected using a 0 degree Truclear 5mm resectoscope with cutting time 2minutes 32 seconds. A polyp blade was used with continuous flow. As there was moderate bleeding following tissue resection a urinary catheter with 20ml saline was inserted into the uterus. This was removed the following day and the patient was discharged awaiting outpatient clinic review.

Histopathology confirmed the presence of retained placental tissue.

Conclusions

Hysteroscopic resection of retained placental tissue is relatively new however has been supported by the literature and warrants further trials. When compared with uterine curettage it may reduce blood loss and long term complications such as Ashermans syndrome.

This case also highlights how conservative management and new surgical techniques can be employed in patients who refuse blood transfusion in order to minimise blood loss. We have also shown how haemoglobin levels can be optimised prior to surgery. These are measures that could be applied to all patients in order to improve patient care.

Hysteroscopic removal submucosal fibroids type 0,I,II by Morcellator MyoSure Hologic

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Background

To evaluate total operative and cutting time , fluid loss, complications and completion of excision of myomas (types O, I, II) with the Hologic Myosure Morcellator.

Methods

From March 2012 untill May 2018 , 69 symptomatic women with and myomas type 0,I,II were preoperatively evaluated with transvaginal ultrasound, sonohysterography and MRI (for types I and II submucus myomas. Three types of Myosure morcellators were used (XL,Stantard,Lite) for the hysteroscopic removal of the lesions.

Results

All myomas were completely removed with Myosure. The XL Myosure was superior for bigger myomas and its use was associated with decreased operative/cutting time and fluid loss. Operative time: myomas (8,00-35,00min)Av time:17,16min. Cutting time: myomas (2,31-12min) Av time:7,73min.Fluid loss: myomas(400-2200ml)Av. 985ml. No complications were observed.

Conclusions

All myomas were completely removed with Myosure. The XL Myosure was superior for bigger myomas and its use was associated with decreased operative/cutting time and fluid loss. Operative time: myomas (8,00-35,00min)Av time:17,16min. Cutting time: myomas (2,31-12min) Av time:7,73min.Fluid loss: myomas(400-2200ml)Av. 985ml. No complications were observed.

Surgical outcomes of total laparoscopic hysterectomy for benign gynecological disease

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Background

The purpose of this study was to determine the causes of massive blood loss and longer operative time during total laparoscopic hysterectomy (TLH) for benign gynecological disease.

Methods

A retrospective case study analysis of 783 patients who underwent TLH was performed for benign gynecological disease between June 2009 and April 2017 in our institution. The estimated intraoperative blood loss and the operative time of these cases were analyzed retrospectively. We investigated factors such as endometriosis and uterine cervical myoma for influence on intraoperative blood loss and operative time.

Results

The mean intraoperative blood loss was 102 ± 112 (g), and the mean operative time was 102 ± 26 (min). 10 cases (1.3%) had bleeding volume exceeding 500 g. 11 cases (1.4%) had operative time exceeding 180 minutes. There was a tendency that the blood loss was massive, and the operation time was prolonged in cases with the presence endometriosis, history of abdominal surgery, or cervical myoma.

Conclusions

These results suggested that the presence of endometriosis, history of abdominal surgery, and cervical myoma might induce massive blood loss and longer operative time during the TLH procedure.

First single centre experience with a novel hysteroscopic polyp removal device in outpatient setting: Resectr 5fr

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Background

To describe clinical experience using Resectr 5fr devices (Boston Scientific, Kerkrade, the Netherlands) in the first seven patients.

Methods

From December 2017 to March 2018, seven cases were selected for hysteroscopic removal of polyps. Six out of seven were patients presenting with postmenopausal bleeding. Saline infused sonography or diagnostic hysteroscopy was performed to prove presence and measure size of the endometrial abnormality prior to planning a removal (<20mm). Fluid inflow was provided by Rocamed fluid management system (Rocamed; Monaco), and suction by Endomath select with footpedal (Karl Storz, Tutlingen, Germany). For suction, regular 8mm tubing was used, and a MTP 030370 tissue-trap (Karl Storz, Tutlingen, Germany), with a wet gauze in it, to collect the specimen. Inflow pressure was 100 mm Hg, whereas outflow was minimum 120 mm Hg. Conform local protocol in case of use of scissors and versapoint-like procedures, no anaesthesia was given to the patients. Primary outcome was to test the newly developed system set-up, and measurement of case details (fluid loss, completeness and speed of resection). Secondary outcome was the surgeons' preferences compared to experiences with different existing techniques.

Results

Hysteroscopic resection of smaller polyps is very well tolerated using Resectr 5fr in office setting using no anaesthesia (VAS 1-3 / 10). In all cases, vaginoscopic approach was performed and pathology was available (See Table 1). Hysteroscopists were positive concerning practical use of the Resectr 5fr device.

Table 1: Summary of primary and secondary outcome measures in all cases

Patient	Status	Instrument	Size (mm)	Consistency	Resection time (sec)	Fluid loss (mL)	Pain (0-10)	View	Polyp?	Vaginoscopy
1	Post	Bettochi 3.8 (Storz)	20	Hard	420	180	3	Blurry	Yes	Yes
2	Post	Bettochi 3.8 (Storz)	35	Hard (myoma?)	390	200	2	Moderate	Yes	Yes
3	Post	Trophy scope	10	(IUD in situ)	10	50	1	Good	Yes	Yes

Patient	Status	Instrument	Size (mm)	Consistency	Resection time (sec)	Fluid loss (mL)	Pain (0-10)	View	Polyp?	Vagin- o- scopy
4	Post	Trophy scope	12	Normal	20	50	1	Good	Yes	Yes
5	Post	Bettochi 3.8 (Storz)	14	Normal	18 (sec)	50	1	Good	Yes	Yes
6	Post	Trophy scope	18	Normal	24 (sec)	60	1	Excellent	yes	Yes
7	Pre	Compact 3.8 (R.Wolf)	16	Normal	18 (sec)	80	2	Good	Yes	Yes

Conclusions

These limited data show that the novel Resectr 5fr device can be of clinical use for quick and complete removal of intermediate and smaller polyps (<20mm). A large prospective trial is needed to verify our findings.

Further validation and evaluation of ePAQ-MPH, a web-based questionnaire for women with menstrual disorders

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Background

The electronic Personal Assessment Questionnaire (ePAQ) system is a web-based, interactive system. ePAQ-Menstrual, Pain and Hormonal (MPH) explores four dimensions (menstruation, pelvic pain, cyclical hormonal concerns, sexual function) encompassing key aspects of conditions in women with menstrual disorders, particularly endometriosis. Other ePAQ questionnaires, as used in several NHS institutions, provide clinically meaningful information and have predictive value in diagnosis. Development continues of ePAQ-MPH in order to enhance its acceptability to patients, to improve patient communication with clinicians, and to subsequently provide patient reported outcome measures (PROMs).

Aims: To assess the psychometric properties of the modified ePAQ-MPH and determine its acceptability in a secondary care general gynaecology clinic setting.

Methods

Patients presenting to general gynaecology or hysteroscopy clinics between 17th April and 29th June 2018 with menstrual problems, pelvic pain or hormonal symptoms were identified in advance and asked to complete ePAQ-MPH online prior to their clinic visit. In clinic, patients were asked to complete a second questionnaire, QQ-11, to determine the acceptability (value and burden) of ePAQ-MPH. Clinicians were also given a similar questionnaire, QI-10, to determine its acceptability in clinical practice. Statistical analysis will be undertaken on completed ePAQ-MPH questionnaires including confirmatory factor analysis, internal reliability, floor and ceiling effects, skewness, construct validity and value and burden.

Results

It is estimated that 200 will have completed it by the end of the data collection period; 133 patients have completed ePAQ-MPH to date. Preliminary analysis of 31 completed QQ-11s showed 23/31 (74.2%) patients found it helped with communication, 26/31 (83.9%) thought it was relevant and 21/31 (67.7%) felt it included all aspects of their concerns; 25/31 (80.6%) found the questionnaire easy to complete and 27/31 (87.1%) agreed that they would be happy to complete the questionnaire again. Full analysis will take place at the end of the data collection period.

Conclusions

The initial response to the modified ePAQ-MPH is positive. If this is confirmed in the larger group then the role of ePAQ-MPH in both primary and secondary care for assessment of patients with menstrual disorders could be explored, as well as developing its use as a PROM following treatment.

Reproductive outcome after hysteroscopic uterine septum resection in women with infertility and recurrent miscarriages

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Background

Uterine malformations are usually detected in women investigated for recurrent miscarriages and infertility. One of the most common structural uterine anomalies is the uterine septum which constitutes 34-48% of all uterine anomalies. It has been reported that 60% of uterine septum cases are affected by spontaneous miscarriages and 6-16% of surviving pregnancies result in preterm labor.

This study aims to estimate the prevalence of uterine septum among Omani women with primary and secondary infertility and recurrent miscarriage, to address the best methods of diagnosis, the most effective management and to estimate the prevalence of pregnancies and live birth after treatment.

Methods

This is a retrospective observational study that was done by reviewing the medical records of 2958 patients who visited the gynecology clinic during the period 1/1/2008- 31/12/2016 at a Sultan Qaboos University Hospital (SQUH), a tertiary hospital in Oman. Primary criteria for inclusion were: Omani women between 15 and 55 years old, diagnosed with infertility or recurrent miscarriages and have no ovulation problem and no male infertility factor. The prevalence of uterine septum, pregnancy rate and live birth rate after septum resection were calculated.

Results

Among 2958 patients who visited the SQUH during the period of the study only 21 patients were found to have uterine septum and met the criteria of the study, making the prevalence 0.7%. The diagnosis of the septum was made with hysteroscopy in 64%, MRI in 27% and 3D ultrasound in 9% of cases. 42% presented with recurrent miscarriages and 58% with infertility (equal proportion of primary and secondary infertility). Patients had hysteroscopic resection of the septum and were usually managed postoperatively with estrogen pills and IUCDs. Fifty two percent of the cases in the second look hysteroscopy were found to have a normal uterine cavity and 29% had a residual septum. 5% were found to have adenomyosis, 38% had endometriosis, and 5% had both adenomyosis and endometriosis, and 52% of cases were not found to be associated with either. The pregnancy rate after septum resection was found to be 57% with a live birth rate of 66.7%. 24% of cases were lost to follow up. Among pregnant cases 35% had term vaginal delivery, 6% had preterm vaginal delivery, 12% had term cesarean delivery, and 18% unfortunately miscarried.

Conclusions

Among 21 cases who visited Sultan Qaboos University Hospital and were found to have a uterine septum we found that commonest method of diagnosis was hysteroscopy. The postoperative management was frequently with estrogen pills and IUCDs. In 52% the uterine cavity post resection on second look hysteroscopy appeared normal. The pregnancy rate and live birth rate improved after septum resection.

A survey of assessing feasibility for a randomised controlled trial of management of endometrial polyps in subfertile women

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Background

The objectives of this survey were to evaluate the feasibility of conducting a RCT comparing the outcome between conservative management (for 3 to 6 months and subsequent polypectomy, if polyp still present) versus immediate polypectomy at the initial diagnosis of endometrial polyps in subfertile women. The current practice for the removal of endometrial polyps in subfertile women without menstrual disorders were also assessed.

Methods

A self-administered questionnaire to UK reproductive medicine consultants, trainees and research fellows with membership or fellowship of the Royal College of Obstetricians and Gynaecologists (n=105). The participants were approached through email with the questionnaire web link attached. The participants were asked about their current practice on management of endometrial polyps in subfertile women in detail. They were also asked if they would be prepared to take part and recruit patients into a potential randomised controlled trial, comparing the outcome between conservative management for 3 to 6 months before proceeding with polypectomy versus immediate polypectomy at initial diagnosis.

Results

We had 56 respondents. 61.8% of the respondents (n=34) have expressed interest to take part and randomise patients in a potential study to compare the outcome between conservative management for 3 to 6 months before proceeding to polypectomy versus immediate polypectomy at initial diagnosis. Hysteroscopy was not part of routine fertility work up by most clinicians (n=50; 91%), a vast majority of the participants (n=52; 94.6%) perform polypectomy if a polyp was accidentally identified on ultrasound scan or during hysteroscopy. 24 participants (42.9%) said that the size of the polyp could affect their decision for polypectomy with majority of them (n=15) chose polyps of 10 mm or more as a cut off size for removal. 48 participants (85.7%) said that polyp number didn't affect their decision for polypectomy. Four participants (7.4%) reported they had hysteroscopy related complications (1 uterine perforation, 1 cervical injury, 1 false passage and 1 not mentioned).

Conclusions

The survey suggests that most clinicians took part in this survey have expressed willingness to take part in a potential RCT to compare the outcome between conservative management for 3 to 6 months before proceeding to polypectomy versus immediate polypectomy at the initial diagnosis of endometrial polyps in subfertile women.

Vaginal fascial reconstruction and laparoscopic Kapanji with PP sling is a good option for advanced apical POP in young patients

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Background

POP still remains unresolved problem. In spite of plenty of methods described rate of recurrences are still high. We know that many "classical" operations didn't provide normal anatomic position of pelvic organs which can lead to failure. That's why in complex cases it's reasonable to use some sort of prosthesis. Frankly speaking all this procedures per se are not ideal. For SSF vaginal vector of proximal vagina goes backward facilitate cystocele formation and SCP especially promontofixation suspend vagina very high and frontally.

Methods

Form January 2015 for young and sexually active patients with advanced prolapse (C<+7 cm) we use combination of site-specific fascial reconstruction of pubocervical and rectovaginal fascia with bilateral SSF of vagina or cervix with prolene sutures or transsacrosplial sling and our developed 25 year ago laparoscopic version of Kapanji operation with fixation of vault or cervix in front of rectus sheath with polypropylene tape. The sling passing form lateral trocar ports retroperitoneally via parametrium and fix it with nonabsorbable sutures to cardinal-uterosacral complex or vaginal vault. Free ends of the slings pass in subcutaneous fat and suturing together with mild tension in front of rectus sheath. In rahabilitation program we always include PFMT.

Results

Total 11 patients enrolled in the study. Three with vault prolapse, 2 with cervical stump prolapse and other – uterine prolapse. Mean preoperative "C point" was 12 cm. Age was 41 ± 6 year. Total procedure time was 109 ± 20 min. Blood loss was minimal. In all cases we've got excellent results. Pain was minimal. Mean follow up was 20 month. No mesh related complications. The position cervix or vaginal vault was very high as well as anterior or posterior compartments. All patients didn't experience any sexual discomfort. Due to SUI in 2 cases transobturator urethropexy were performed. According PFDI-20 and PFIQ-7, function of bladder and rectum was satisfactory without worsening of symptoms in any cases.

Conclusions

This laparovaginal method is highly effective for the young sexually active patients with 4-th degree advanced apical POP. On the one hand it provides correction all defects at perineal level and 2-nd level, on the other hand strong long-term fixation of apical compartment with minimal complications in experienced hands.

Recurrent ectopic pregnancy at the ipsilateral tubal stump following total salpingectomy – Case report and Review of Literature.

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Background

Ectopic pregnancy continues to be an important cause of maternal morbidity and mortality. We present a case of a 38-year-old woman who had an ectopic pregnancy occurring in the stump of a fallopian tube following ipsilateral salpingectomy for a ruptured ectopic pregnancy.

Methods

A 38-year-old woman presented to the A&E department of a tertiary hospital, with 4 weeks amenorrhoea and a history of lower abdominal pain for one day. She had no complaints of bleeding per vaginum, dizziness or gastrointestinal symptoms. She had a right sided tubal ectopic pregnancy 8 months prior, for which she had a laparoscopic total salpingectomy. On clinical examination vital signs were stable and there was no pallor. Her abdomen was soft but distended, with generalized tenderness on palpation.

Her serum Beta hCG level was 825.1IU/L. A transvaginal ultrasound scan showed empty endometrial cavity (figure 1) and moderate hemoperitoneum in the pouch of Douglas (figure 2). There was no obvious adnexal mass seen. No corpus luteum was noted.

In view of severe pain in abdomen, hCG levels 825.1IU/L and ultrasound suggestive of moderate hemoperitoneum, the diagnosis of ruptured ectopic pregnancy in contralateral tube was suspected. The differential diagnosis was ruptured corpus luteum cyst leading to hemoperitoneum. However, there was no corpus luteum evident on ultrasound scan.

Results

The decision was made for a diagnostic laparoscopy followed by salpingectomy or cystectomy depending upon the intra-operative findings. Intra-operatively, she was found to have moderate hemoperitoneum and ruptured ectopic pregnancy measuring about 1cm and arising from the right tubal stump at the site of previous salpingectomy.

Conclusions

This is a rare presentation for ectopic pregnancy and yet has significant consequences for the patient owing to diagnostic dilemma and increased mortality rate. It also emphasizes that salpingectomy does not exclude recurrence of ipsilateral ectopic and highlights the need for high index of suspicion. This case-report also summarizes the importance of precise surgical techniques.

Robotic single-site hysterectomy versus robot-assisted multiport hysterectomy in benign gynecologic diseases: A retrospective comparison of clinical and surgical outcomes.

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Background

To compare clinical and surgical outcomes of robotic single-site hysterectomy (RSSH) and robot-assisted multiport hysterectomy (RH) in benign disease.

Methods

We retrospectively reviewed the medical records of 38 women who underwent RSSH (N= 12) or RH (N= 26) for the treatment of benign uterine disease between June 2015 and November 2017.

Results

There were no intergroup differences in parity, comorbidities, and number of previous abdominal surgery. Mean age was older (49.5 ± 5.05 yrs vs. 44.4 ± 3.54 yrs, $P= 0.001$) and mean BMI was higher (27.4 ± 2.47 kg/m² vs. 25.3 ± 3.12 kg/m², $P= 0.045$) in RSSH group than RH group. Surgical outcomes, including operative time (165.0 min vs. 159.2 min, $P= 0.727$), estimated blood loss (115.8 ± 33.15 mL vs. 108.1 ± 56.42 mL, $P= 0.662$), uterus weight (445.9 ± 157.21 g vs. 374.5 ± 197.91 g, $P= 0.291$), postoperative hospital stay (5.4 ± 0.51 days vs. 5.8 ± 1.20 days, $P= 0.289$), postoperative hemoglobin change in day 1 (1.8 ± 0.89 g/dL vs. 1.4 ± 1.53 g/dL, $P= 0.431$) and day 3 (2.1 ± 1.32 g/dL vs. 1.7 ± 1.83 g/dL, $P= 0.601$), and perioperative complications did not significantly differ between two groups. The use of additional analgesics after 6 hours, 24 hours, and 48 hours, and mean NRS score after 6 hours, 24 hours, and 48 hours were not significantly different between two groups.

Conclusions

RSSH might be an effective and safe alternative to RH, even if in older and/or obese women with large uteri.

Combination of slings and site-specific POP reconstruction by vaginal route. Multicenter study.

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Background

Due to FDA warnings regarding using mesh in vaginal surgery and medicolegal issues worldwide there are big intention to diminish use of synthetic material with good outcome and improvement of QoL. With development of Integral Theory by P.Petros we understand importance of precise anatomical restoration and augmentation all pelvic “ligaments” and fascia using polypropylene tapes. We developed “low cost” trocar guided variation of POP restoration.

Methods

Procedure begins with the incisions of anterior and posterior vaginal wall, mobilization of the rectovaginal and pubocervical fascia, identification SSL, CL and internal obturator muscle. We use two 7mm low elastic polypropylene tapes. Posterior sling pass through SSL “inside-out” manner and place middle part in front of cervix. Anterior sling is passing through obturator foramen near attachment of ATLA to pubis symphysis. Both slings are fixed to the cervix anteriorly. After that, we restore fasciae in site-specific manner and plicate both cardinals in front of the cervix with prolene sutures thus covering the tapes anteriorly. If indicated, lax perineal body, anal spinster or PUL also repaired.

Results

Since 2016 we have done 34 procedures in 4 clinics in Moscow region performed by senior surgeons. Indication was: different types of symptomatic POP 2-4 stages (POPQ). Simultaneous operations were: trachelectomy in 8,8%, LS supracervical hysterectomy in 8,8%, TVT-O in 23% cases, PB repair (29%) include EAS repair (3%). To estimate outcome we used: QOL questionnaires (PFDI-20, PFIQ-7, FSFI) and factor analysis of the symptoms according diagnostic algorithm, ultrasound examination of pelvic floor, Rö defecography if indicated. Operation time was 90±25 min. Blood loss never exceed 150 ml. We have 1 complication during perineoplasty breakdown of the needle which required wide dissection of right ishiorectal space results in hematoma of subcutaneous fat – without consequences. In all cases pain was mild (1-4 VAS) localized in perineal body or buttocks treated with NSAID not more 2-4 days. Mean follow up were 15±3 mounts. Erosion rate was zero. There were statistical improvements of functional results of symptoms before and after the operation: PFDI-20 115,5/48,7 (p<0,01), PFIQ-7 68,7/14,4 (p<0,01). Sexually active patients (67%) report improvements according FSFI (p<0,01). There was significant improvement of symptoms: bulge 96 to 0%, pelvic pain - 14 to 3%, dyspareunia 29 to 3%, obstructive urination 29 to 0%, frequency 47 to 6%, urgency - 11,7 to 0%, stress incontinence - 23 to 7% (in 7% cases of de novo SUI midurethral sling was performed during first 12 month), obstructive and dyssynergic defecation 17 to 3%, AI 7 to 0%, nocturia 29% to 0%. We noted 2 (5,8%) asymptomatic cases of cystocele and apical prolapse 2-nd degree without reoperation.

Conclusions

Short-term results make possible to consider this approach as effective minimally-invasive method of “functional surgery”. However, long-term multicenter study needed.

Laparoscopic paratubal cystectomy with conservation of left torted fallopian tube
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Background

Paratubal cysts constitute about 10% of adnexal masses. They are often asymptomatic unless they bleed, grow excessively, rupture or become torted. Paratubal cysts are associated with an increased rate of ectopic pregnancy. MRI has an advantage to ultrasound in diagnosis and only 44% of cases are diagnosed pre-operatively.

Methods

We present a case study involving management options for torted fallopian tube secondary to paratubal cyst in a patient wishing to conserve fertility.

40 year old female presented with 1 day history of severe left iliac fossa pain. Transvaginal ultrasound showed simple cystic structure (50x33mm) next to left ovary with small haemoperitoneum. Laparoscopic three port paratubal cystectomy performed using thunderbeat.

Results

Patient had uneventful surgery with uncomplicated recovery, being discharged on day 1 post operative. She went on to have a successful pregnancy 6 months later.

Conclusions

Studies have shown significantly higher rate of tubal patency following paratubal cystectomy. Data regarding ectopic pregnancy rate and functionality of the tube following paratubal cystectomy is lacking, however common practice is to perform salpingectomy when concerns regarding the tube exist. In our case, after extensive counselling including discussion about possibility of ectopic pregnancy, the patient wished her tube to be conserved regardless of existing damage. This case highlights the need for proper counselling and careful consideration of patient wishes prior to any surgical procedure.

Rapid access gynaecology service: the new way forward

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Background

Direct visualization of the cervix and uterine cavity for diagnostic and therapeutic purposes was commonly considered a day-case procedure involving general anaesthetic and a short to medium term stay in hospital. The advent of small diameter modern hysteroscopes has offered the possibility of these procedures being carried out in the outpatient setting. A rapid access gynaecology service was launched in 2014 at St Helier Hospital providing transvaginal ultrasounds and diagnostic hysteroscopies. The success of this service led to the introduction of operative hysteroscopies on an outpatient basis.

Objective

To compare patient satisfaction and pain scores of pre- and postmenopausal women undergoing outpatient removal of endometrial polyps/fibroids using the Myosure device, taking into account parity and modes of previous deliveries.

Methods

St Helier hospital based prospective study. 60 patients who chose to have endometrial polyps and/or fibroids resected under local anaesthesia were recruited. Procedures were performed using a 6.25mm hysteroscope with a Myosure device. Pain scores were assessed using 100mm visual analogue score (VAS) along with patient satisfaction assessed immediately post procedure.

Pain management was a combination of paracervical injection with a local anaesthetic agent in the form of lidocaine hydrochloride 2% with adrenaline and intracervical infiltration with instillagel (lignospan).

Results

The median age was 54 years (range: 33 to 87 years).

55 % of the women were premenopausal while 45% were postmenopausal.

Mean polyp size was 18.3mm (range: 5-40mm) whilst mean fibroid size was 26.3mm (range : 10-40mm) .

Pain scores in premenopausal women: local anaesthetic application 3.5, cervical dilatation 3.7, during the procedure 2.6.

Pain scores in postmenopausal women: local anaesthetic application 3.0, cervical dilatation 4.1, during the procedure 2.75.

Pain scores in nulliparous women: local anaesthetic application 2.8, cervical dilatation 3.8, during the procedure 3.2.

Pain scores in multiparous women: local anaesthetic application 3.0, cervical dilatation 3.8, during the procedure 2.5.

Pain scores in multiparous women who had only delivered by caesarean section: local anaesthetic application 5.7, cervical dilatation 5.2, during the procedure 3.3.

The success rate was 97%, which meant all women tolerated the procedure except one case of a postmenopausal lady not tolerating the speculum. Satisfaction rate was 92% mainly due to the lack of general anaesthetic and same day discharge.

Conclusions

Hysteroscopic morcellation for endometrial polyps, fibroids and uterine septum division appears to be an efficacious and safe procedure in the outpatient setting. Pain scores for cervical dilatation and during the procedure were higher in postmenopausal women. Overall, women who had only delivered by caesarean section found the procedure more painful.

The combination of instillagel and local anaesthetic in the form of lignospan provides adequate pain relief to perform hysteroscopic morcellation with a success rate of 97% in our study group.

Survey of Liver function abnormalities in women having medical management of fibroids with Ulipristal Acetate

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Background

Ulipristal Acetate is used for the treatment of moderate to severe symptoms of uterine fibroids. Ulipristal Acetate, works by attaching to the targets on receptors that the hormone progesterone normally attaches to, preventing progesterone from having its effect. Since progesterone may promote the growth of fibroids, by preventing the effects of progesterone Ulipristal Acetate reduces the size of the fibroids. Five reports of serious liver injury, including four cases of hepatic failure needing liver transplantation, have been reported worldwide in women using Ulipristal for uterine fibroids. It is estimated that around 765,000 patients have been treated with Ulipristal Acetate to date.

Methods

With the European Medical Authority statement release of temporary measures following reports of liver injury we have reviewed all women who have been on Ulipristal Acetate for the treatment of fibroids since January 2017 at Norfolk and Norwich Hospital, UK.

Results

A total of 179 women have been on Ulipristal Acetate either as a single course of 5mg once daily for 3 months or up to 4 repeated 3 month courses with a 3 month break in between the courses. 65% had only 1 course of the medication. All the patients were premenopausal. Most of them (93%) had Ulipristal for heavy menstrual bleeding or both heavy menstrual bleeding and pressure symptoms. Only 7% had Ulipristal for pressure symptoms. 4.8% had transient abnormal liver function tests which reverted back to normal after stopping the medication. 17% had hysterectomy, 4% had myomectomy, 2% had uterine artery embolization following Ulipristal. The histology in all cases was benign leiomyoma.

Conclusions

There have been no cases of serious liver dysfunction and no permanent abnormal liver function. No new courses of Ulipristal have been started since the safety concerns regarding serious liver injury with Ulipristal were raised.

Effects of life events on structural properties of the vagina in the ovine model

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Background

Pathophysiology behind pelvic organ prolapse (POP) can be explained by a complex multifactorial association. Recent studies have shown that modifications in histological properties and therefore biomechanical properties of vaginal tissue could contribute to its pathogenesis. The objective of this study was to assess the histological changes on vaginal tissue of certain life events in the ovine model.

Methods

Thirty swifter sheeps were divided into five groups (n=6/group): neonatal, prepubescent, after vaginal delivery (AVD), after cesarean section (ACS) and multiparous. The vagina was removed *en bloc* from the animal and two samples suitable for histologic analysis (1 × 1 cm) were obtained in the distal third and middle third of the vagina. After fixation in paraformaldehyde, tissue specimens were stained with hematoxylin and eosin, Masson trichrome for collagen, Miller's pentachrome for elastin and immunohistochemically for α -smooth muscle actin (α -SMA) for smooth muscle. The thickness of the lamina propria and muscularis were measured and mean densities were calculated for each group at each location considered.

Results

We analysed the histological properties of three components of the vaginal tissue (α -SMA, collagen and elastin) in the lamina propria and muscularis layers:

- *Smooth muscle actin*: There was a significant increase in SMA density in distal vagina of the AVD group compared to both ACS and multiparous groups. In middle vagina, the multiparous group had a lower SMA density than both the AVD and ACS groups.
- *Collagen density*: The prepubescent group had a higher collagen density than the other groups in middle vagina. In the AVD group there was a significant increase in collagen density compared to the ACS group in middle vagina.
- *Elastin*: In both regions, elastin density was increased in AVD, ACS and multiparous groups. The increase was even more significant in the AVD group in middle vagina.
- *Lamina propria thickness*: There was an increase in lamina propria thickness in all prepubescent, AVD, ACS and multiparous groups compared to the neonatal group in both locations.

Muscle thickness: Mean muscle thicknesses were higher in all groups compared to the neonatal group regardless of locations.

Conclusions

Elastin density was increased in animals in which pregnancy has taken place regardless if they had vaginal delivery. This could be explained by the hormonal effect of pregnancy itself on vaginal tissue as seen in other studies. The concomitant decrease in collagen density in middle vagina of the same groups when compared with prepubertals may accentuate the loss of resistance of the vagina. Finally, because of the shared progressive increase from lamb to sheep of both thicknesses of lamina propria and muscle, we suspect that it was caused by differentiation of the vaginal tissue more than a specific effect of a given life event.

Effectiveness of nitrous oxide for pain relief during outpatient hysteroscopy in postmenopausal patients

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Background

Pain and anxiety can interfere in the feasibility of gynecological procedures. This could be more evident in postmenopausal patients. We describe our experience with the use of inhaled nitrous oxide in postmenopausal patients when performing outpatient hysteroscopy in a teaching hospital.

Methods

A total of 1315 postmenopausal patients who underwent diagnostic hysteroscopy and informed consent provided, from November 2012 to May 2018 at Príncipe de Asturias University Hospital, Alcalá de Henares; Madrid, Spain.

Medical and surgery history, procedural description, complications, surgical technique performed, pain scale and satisfaction grade were collected.

An operating 5,5 mm double way hysteroscope (Karl Storz Endoscope, Bettocchi) with 0,9% saline solution irrigation through Endomat device was used.

Results

Age group of postmenopausal patients: 35-93. Mean procedure time: 7,8 min.

In relation to pain assesment, the average pain score immediately postprocedure was 3,30 (on a 0 to 10 scale)

Overall, patients satisfaction was high: 7,39, on a 0 to 10 scale. In addition, complication rate related to inhaled nitrous oxide was low:3,14%, being light dizeness the most frequently appeared.

Conclusions

The use of inhaled nitrous oxide as analgesic during the performing of an outpatient hysteroscopy is a simple analgesic technique, self administrated, well tolerated and safe, which increase patient tolerance to the exploration. It also facilitates the performance by the hysteroscopist, improving the time for surgical procedures

Post-ablation syndrome following trans-cervical resection of the endometrium

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Background

Endometrial ablation techniques are now commonplace in the management of menorrhagia in the western world. Post-ablation syndrome (PAS) is a chronic condition represented in a minority of women who have undergone an endometrial ablation procedure and subsequently present with chronic, sometimes cyclical pelvic pain. The diagnosis of this relatively unknown condition of post-ablation syndrome requires a combination of clinical suspicion and imaging findings, and it often runs a challenging and prolonged course.

Methods

We present a case of a 49 year old lady who underwent trans-cervical resection of the endometrium (TCRE) procedure in March 2017. Nine months prior to this, Novasure endometrial ablation had been attempted, but abandoned as a sufficient seal for the device could not to be secured. The TCRE procedure was initially successful, providing six pain-free month of amenorrhoea. However the next six months was characterised by cyclical crampy period-type pain, which culminated in an acute admission to hospital with severe pain.

Results

Ultrasound imaging revealed a haematometra and a left-sided 5cm cystic-tubular structure in the left adnexa. At hysteroscopy, the stenotic cervix was successfully dilated and the haematometra was drained. Laparoscopic findings were of bilaterally over-distended, dilated haematosalpinges. The left fallopian tube was significantly distorted and densely adherent to the neighbouring ovary, and obliterating the ovarian fossa. Thus, a left-salpingo-oophorectomy and right salpingectomy was performed.

Conclusions

Histological analysis of the operative specimens showed features of chronic salpingitis. We surmise that in this case, the ablative procedure had led to uterine contractures and scar tissue which occluded the cervical canal, preventing normal antegrade passage of menstrual material. Furthermore, subsequent retrograde menstruation then led to the formation of haemato-salpinges, resulting in clinical presentation of chronic pelvic pain.

Outcomes of office hysteroscopy in a Brazilian University Hospital

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Background

Hysteroscopy is considered the gold standard for evaluation of intracavitary pathology associated with both pre and postmenopausal patients with abnormal uterine bleeding, as well as part of the study of infertility patients with suspected cavity abnormalities. Hysteroscopy can be performed for diagnostic or therapeutic indications. The objective of this review is to evaluate the outcomes in office hysteroscopies at Hospital São Paulo - UNIFESP in a one year period.

Methods

In this study, hysteroscopies were performed in an office setting, in the gynecology department, at a University hospital of the Federal University of São Paulo, UNIFESP. During the year of 2017, there were 326 exams performed by two physicians. The following regions were examined: vagina, cervix, endocervical canal, endometrial cavity and the tubal ostia.

Results

A total of 326 hysteroscopies were performed in a one-year period in patients ranging from 19 to 88 years, with an average age of 53.66 years. The main indications for this evaluation were: postmenopausal endometrial thickening (38.34%), post-menopausal bleeding (20.55%) and suspicious ultrasound for endometrial disease (18.4%). Among the findings of the endocervical canal no abnormality represented 79.14%, endocervical polyp was found in 7.05%, internal orifice stenosis in 11.35%, external orifice stenosis in 13.2%, and 1.5% of the exams were interrupted due to pain. About intracavitary findings, normal tests corresponded to 27.3%, whereas fibroid to 4,9%, endometrial polyp to 40.48% and findings suggestive of malignancy to 1.5%. In this particular group of five patients with suspected malignancy, 60% presented a pathological anatomical diagnosis of neoplasia.

Conclusions

Using hysteroscopy for the initial approach offers the potential benefit of combining evaluation with treatment of the endometrial cavity, tubal ostia, or endocervical canal in women. Also, hysteroscopy avoids the risk of missing focal pathology, as may occur with blind endometrial sampling. The outcomes of this study are compatible with data found in the world literature.

Intra uterine device in isthmocele. Case Report

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Background

Worldwide, the rates of caesarean section (CS) are rising.¹ The presence of an anechoic area at the site of a caesarean scar has been observed in women after a caesarean section, in transvaginal sonography about 24–69%. Such an anechoic area is known as a niche, isthmocele or cesarean scar.² Approximately 60% of women have isthmocele after a caesarean section, and of these approximately 30% experience postmenstrual spotting.² Other reported symptoms are dysmenorrhea (53.1%), chronic pelvic pain (36.9%), and dyspareunia (18.3%).³

The treatment of isthmocele includes hysteroscopic resection⁴, reconstruct the uterine defect in the caesarean section scar [abdominal, (robotic) laparoscopic, or vaginal repair]⁵ and reduce menstrual periods with hormonal therapies⁶. These interventions should only be considered in symptomatic patients. As our patient was asymptomatic, we did not performed hysteroscopic resection.

Long-acting reversible contraceptive (LARC) is the most clinically and economically effective type of contraception (implants and IUD)⁷. IUD can be inserted into women who have had a CS on two ways: at the time of CS or 42 days or more after CS.⁸ Inserting at the time of CS adds very little time and cost to the procedure, there is no risk of primary perforation (secondary perforation is possible) as it is performed under direct vision.⁹ The difference between the post-CS at around 6 weeks and the truly interval insertions (≥ 90 days post-CS) is the risk of certain specialized complications like perforations.¹⁰

Office hysteroscopy can avoid misplaces IUD embedded in cesarean section scar.¹¹

Methods

The aim of this study is to report case of intra uterine device inside isthmocele. A consent form was applied to the patient.

Results

RBG, 35 years old, caucasian, was pregnant three times, two cesarean births and one abortion, underwent bariatric surgery two years ago. She went to the office for a long-term contraceptive method. Through poor absorption by the gastrointestinal tract was opted for the levonorgestrel-treated intra uterine device (IUD). Sonography showed no alterations inside the uterine cavity. The IUD was placed on the office. Patient did not return with the control image exam in one month however after 9 months she came with regular menstrual bleeding and dysmenorrhea. On sonography IUD were found in the cervix, not the uterine cavity. Submitted to diagnostic hysteroscopy the IUD was observed in the isthmocele. At this time the device was repositioned. After 3 months, the patient presented amenorrhea and total improvement of dysmenorrhea.

Conclusions

We suggest office hysteroscopy at the same time inserting IUD in women with previous cesarean birth. We need more studies for better conclusions.

Evaluation of the hysteroscopic practice “See-and-Treat” in a tertiary center of gynecological surgery

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Background

Analyze the indications of “See-and-Treat” hysteroscopies in a tertiary center of gynecological surgery.

Methods

Monocentric retrospective study of hysteroscopic activity from January 2016 to December 2016 included, at the CHR Citadelle, Liège, Belgium. We analyzed 810 diagnostic hysteroscopies and 318 operative hysteroscopies. As an indication of management by “See-and-Treat”, we chose polyps less than one centimeter, synechiae, trophoblastic remains and all maneuvers involving an intrauterine device (IUD). We excluded fibroids and polyps more than one centimeter because our goal is to perform a therapeutic office hysteroscopy without any local anesthesia or sedation.

Results

According to the diagnosis made during the diagnostic hysteroscopies, 29% (n = 231) of them could be treated by “See-and-Treat”. 162 of these 231 diagnostic hysteroscopies are already supported by therapeutic outpatient hysteroscopy, these mainly involving the IUD. Concerning the management of the others diagnostic hysteroscopies, 312 (39%) have to be supported by operative hysteroscopy, 68 (8%) by surgery and 194 (24%) of them are normal and don't need more management (5 hysteroscopies have not been realized).

In parallel, 30% (n = 95) of operative hysteroscopies treated lesions that could have been treated by “See-and-Treat” and so could have avoided the costs and disadvantages of hospitalization. The remaining 70% (n = 223) required an operative hysteroscopy only or associated with a laparoscopic surgery.

Conclusions

This study has shown that one-third of both diagnostic and operative hysteroscopies has indications of “See-and-Treat” management. There is therefore a clear indication to extend our practice of therapeutic outpatient hysteroscopy in a tertiary center of gynecological surgery.

Recurrent catamenial pneumothorax caused by thoracic endometriosis - a case report

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Background

Endometriosis is defined as the presence of ectopic endometrial tissue (glands and stroma) outside the confines of the uterine cavity and musculature. It most commonly involves the pelvis, however, endometrial tissue can be found outside it. Thoracic endometriosis is a rare disease that primarily affects young women. The incidence in the general population is unknown. The most common presentation (70 to 73 percent) of thoracic endometriosis is catamenial pneumothorax. Catamenial pneumothorax (CP) is a spontaneous pneumothorax commonly associated with menstrual periods, which encompasses the period of 72 hours before and after menstrual bleeding. CP is associated with pelvic endometriosis in 30-50% of cases. Due to a delay in diagnosis, which is typical of patients with thoracic endometriosis, pneumothorax is frequently recurrent.

Several hypotheses have been proposed to explain the pathogenesis of thoracic endometriosis, some of which are: physiological, migrational, microembolic-metastatic, and the diaphragmatic theory of air "passage".

Thoracic endometriosis should be suspected in young women during their reproductive age with catamenial pneumothorax or hemothorax, especially in those who have a history of prior uterine surgical procedures or proven pelvic endometriosis (present in 65 to 84 percent).

Treatment for catamenial pneumothorax involves hormonal therapy and surgical treatment.

Methods

S.S.J., 30 years, presented with three pneumothorax episodes between 2016/2017 with temporal relationship with menses, after thoracoscopic parietal pleurectomy. The patient was submitted to thoracoscopic pleurectomy after the first episode of catamenial pneumothorax in 2015 but did not respond satisfactorily. A pleural biopsy was performed with results of estromal and epitelial proliferation with progesteron receptors and expression of PAX8, WT-1 and CD10. After the diagnosis confirmation of thoracic endometriosis, the patient was forwarded to our endometriosis department where she underwent through a transvaginal ultrasound that also confirmed deep pelvic endometriosis with ovarian, sigmoid, right uterosacral ligament and uterus serosa lesions.

Results

The patient was treated with gonadotrophin-releasing hormone analogues and levonorgestrel-releasing intrauterine system presenting amenorrhea with no recurrence of the symptoms until this date.

Conclusions

Gonadotrophin-releasing hormone analogues, when used as an adjunct to surgical intervention, have been associated with a lower incidence of recurrence of catamenial pneumothorax in current literature, although evidence is based on a reduced sample. Further studies should be conducted for better treatment basement.

Transient isolated gross hematuria after laparoscopic salpingectomy

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Background

Common causes of hematuria during operation is damaged urinary system.

Methods

I took a laparoscopic salpingectomy because of tubal pregnancy.
After operation, our team found there was gross hematuria.
We took emergency cystoscopic exam immediately,
Gross hematuria came out from both ureter and took photos.
Fortunately, gross hematuria was stopped few minute later.

Results

I worked up to find cause of hematuria
There were no precise cause.

Conclusions

I report here there was transient gross hematuria from both ureter without damaged urinary system.

Mode of hysterectomy preceding the need for vault suspension: Analysis of laparoscopic sacrocolpopexy cases over 10 years

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Background

To assess the mode of hysterectomy undertaken prior to the need for vault suspension and inter-surgery time frame in a 10year cohort of patients who underwent laparoscopic sacrocolpopexy within our unit.

Methods

A retrospective audit of all laparoscopic sacrocolpopexy (LSC) cases undertaken from April 2007 to April 2017 was performed. A proforma was devised which addressed patient demographics, surgery performed prior to LSC and time interval between operations. Manual chart review undertaken.

Results

The setting was a secondary level health care facility.

29 patients were identified from a clinical coding search.

Average follow-up time 42 months (range 6-112).

Average: age 61.8yrs, parity 3 and BMI 26.2 (range 18.4-38.6).

93.1% (n=27) primary vault suspension procedure.

By mode of preceding surgery: 37.9% (n=11) Total Abdominal Hysterectomy, 34.5% (n=10) Vaginal Hysterectomy, 13.8% (n=4) Total Laparoscopic Hysterectomy, 10.3% (n=3) Total Laparoscopic Hysterectomy with Uterosacral Plication, 3.4% (n=1) Vaginal Hysterectomy with McCall's Culdoplasty.

Overall 86.2% of cases had underwent preceding hysterectomy without any preventative surgical technique employed with respect to vault prolapse.

Time interval between surgeries ranged from 1-30years.**Conclusions**

This project highlights the importance of employing preventative techniques at the time of hysterectomy. As per RCOG guidance McCall's Culdoplasty at the time of vaginal hysterectomy and suturing the cardinal and uterosacralligaments to the vaginal cuff at both abdominal and vaginal hysterectomy are effective preventative techniques in relation to post hysterectomy vaginal vault prolapse. Sacrospinous ligament fixation at the time of vaginal hysterectomy should also be considered if the vault descends to the introitus at closure. These approaches should be adopted in all cases to aid avoiding the need for further surgery.

VIDEO IN POSTER EXHIBITION AREA PRESENTATIONS (18)

ES27-0268 - VP002

Video in Poster Session

Knowing when to convert to laparotomy - a ruptured vein overriding a myoma can cause a life-threatening pre- and per-operative bleeding

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Background

Deciding when to convert is one of the most challenging decisions that an endoscopic gynaecologist has to make. As endoscopic surgery has become the primary choice of surgery, experience with laparotomy is becoming a limitation. In this abstract we will use a clinical case, of a patient undergoing an acute diagnostic laparoscopy where veins spontaneously ruptured causing serious bleeding, to exemplify when to convert.

Methods

A 37-year-old, otherwise healthy young woman was admitted complaining of periumbilical pain. She had also noticed that her abdomen had increased in size during this period. On admission a CT scan was done showing a heterogenous pelvic mass of unknown origin, measuring 15 x 8,5 x 9,5 cm. The patient was initially observed but after twelve hours her haemoglobin had decreased from 7,5 to 4,5 mmol/L. A laparoscopy was initiated and a myoma with overriding veins diagnosed together with intraabdominal blood and clots and an ongoing bleeding from the veins. During the operation haemostatic efforts were made using bipolar energy. Several bleeding veins were found, due to the size of the myoma and inability to ensure sufficient haemostasis the decision to convert to laparotomy was made.

Results

Two myomas weighing in total 588 g were resected. The myoma was found to be leiomyomas on subsequent pathological examination. The patient bled 2000 mL in total but recovered without any complications, she was discharged after two days, no further myomectomy needed.

Conclusions

Rupture of dilated veins can cause bleeding and is a potentially life-threatening condition. It is crucial that the operating surgeon knows when to convert to laparotomy to prevent the patient from unnecessary risks. The video shows the endoscopic management of the bleeding myoma and identification of a sudden rupture of a dilated vein leading to the decision to convert to laparotomy.

<https://player.vimeo.com/video/269943142?autoplay=1>

Technical pearls for laparoscopic ureter re-implantation (ureteroneocystostomy)

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Background

Urinary tract DIE (deep infiltrating endometriosis) is a relative uncommon disease. Intrinsic ureter DIE lesions will induce obstructive uropathy (hydroureter and hydronephrosis), and ultimately silent kidney loss. Intrinsic ureter DIE lesions can be managed laparoscopically with either segmental resection and re-anastomosis (uretero-ureterostomy), or ureter re-implantation (uretero-neocystostomy). In this video, we will demonstrate the technique of ureter re-implantation.

Methods

Surgical videos were collected and edited.

Results

When dealing with posterior and lateral DIE lesions causing hydroureter, thorough adhesiolysis (including ureterolysis) and radical DIE excision was performed first. The intrinsic ureter DIE lesions can then be resected. In order to create a tension-free environment, Retzius space was dissected first, to bring down the bladder. Ipsilateral Psoas hitch was then performed. The proximal ureter was well-mobilized, and spatulated. After filling the bladder, a 2-3 cm incision over detrusor muscle was made. A 1 cm cystotomy was then performed. The bladder wall was then approximated with the spatulated ureter opening, with a ureter stent in situ. The remaining detrusor muscle defect was then re-approximated, crossing over the ureter, making a “tunnel” for the purpose of anti-reflux. The Foley catheter was left for 7-10 days, and the ureter stent was left for 6 weeks. This whole procedure can all be done by experienced GYN laparoscopic surgeons, without the assistance from urologist.

Conclusions

LSC ureteroneocystostomy (ureter re-implantation) is feasible, and can be done by experienced GYN laparoscopic surgeons, without the assistance from urologist.

<https://player.vimeo.com/video/269693409?autoplay=1>

Laparoscopic combined with transvaginal pelvic reconstruction for advanced pelvic organ prolapse

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Background

How to reduce recurrence and decrease complication is still a problem for those patients with advanced pelvic organ prolapse (POP). Here we introduce our technique of laparoscopic combined with transvaginal pelvic reconstruction for advanced concomitance of anterior and apical POP.

Methods

The 54-year-old woman (60kg, menopausal; POP III/III/I) complained of vaginal bulge for 5 years, which seriously affected her daily life, and then sought to surgery. Vaginal hysterectomy was performed. The anterior vaginal was separated in entire layers from the bladder, after an injection of saline with Methylene blue into it. Then bilateral vesicovaginal spaces were separated sharply along the descending ramus of the pubis. Rectovaginal space was separated. Two arms of PR-4 mesh (DynaMesh-PR4; Aachen[®], Germany) were stitched firstly by nonabsorbable suture. Under laparoscopy, the entrance into retropubic space by ultrasound knife was accomplished firstly. Two arms of PR-4 were passed through vesicovaginal space to retropubic space bilaterally, and then were fixed on arcus tendineus levatoris ani (ATLA) separately. Another arm of PR-4 was passed through rectovaginal space to peritoneal cavity and was fixed to sacral promontory (S1) after right pelvic peritoneum was dissected from the promontory to the vault. Before finishing the surgery, we closed the pelvic peritoneum.

Results

The procedure was successfully performed in 90 minutes, with the blood loss 50 ml. This patient was discharged with complete recovery. Neither prolapse, nor mesh erosion or other complications was happened in six-month follow-up.

Conclusions

Laparoscopic combined with pelvic reconstruction is a feasible and efficient choice for advanced prolapse, which theoretically could avoid recurrence and mesh-related complications. However, more cases should be enrolled and more long-time follow-up are required.

Laparoscopic retrieval of a missed pelvic IUS

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Background

Intrauterine system (IUS) is one of the most common methods of contraception in the UK. It is widely used as a contraceptive as well as a recommended first line treatment option for Heavy Menstrual Bleeding (HMB) for patients experiencing Dysfunctional Uterine Bleeding (DUB) or with Fibroids less than 3 cm in diameter in the presence of a uniform endometrial cavity.

Complications are not common. One of the rare complications of IUS insertion is perforation of the uterus, resulting in the IUS migrating into the pelvic/abdominal cavity. This can potentially cause consequent complications from adhesions formation, infections and injury to other pelvic/abdominal organs.

Methods

Our case is a 32-year lady who presented with missed IUS a few weeks following insertion. An Ultrasound Scan (USS) confirmed the absence of the IUS from the endometrial cavity. Pelvic and Abdominal X-rays have confirmed the presence of the IUS within the pelvic cavity.

Results

The patient had a diagnostic laparoscopy that confirmed the presence of the IUS inside the pelvic cavity. The IUS was found entrapped within an omental fold and was removed using advanced diathermy device.

Conclusions

Despite being a rare complication, however, retrieval of a perforated IUS can be challenging. Care must be taken while operating as the longer the IUS stays within the abdominal/pelvic cavity the more likely it will be involved in a local inflammatory reaction. Bowel injury can be avoided by very careful dissection and gentle retrieval of the IUS.

<https://player.vimeo.com/video/267778765?autoplay=1>

Laparoscopic multiple myomectomy – a minimal invasive approach in the treatment of symptomatic leiomyomas

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Background

Laparoscopic myomectomy offers several advantages compared with abdominal myomectomy, including decreased morbidity and a shorter recovery. Determining if a woman is candidate for laparoscopy approach depends upon location, size and number of leiomyomas, although parameters for this vary with surgical expertise. The purpose of this video is to demonstrate various techniques used in laparoscopic approach of multiple myomectomy using video.

Methods

The abdominal cavity was entered through the umbilicus with the use of a 10mm trocar and 3 ancillary trocars were placed in the lower quadrants and suprapubic location under direct visualization. We demonstrate suspension of both ovaries using T-Lifts to improve exposure, identification of uterine artery by pulling the medial umbilical ligament and temporary clipping of both uterine arteries in their origin, to reduce blood flow to the uterus and also clipping of infundibulopelvic ligaments with the same purpose. We show multiple leiomyoma enucleation and suture of uterine defects using extracorporeal inverted sutures. Leiomyomas were extracted using an endobag with access through the posterior vaginal wall and intracorporeal suture of vaginal opening.

Results

Total operative time was 1 hour and 20 minutes and estimated blood loss 70ml. Seven leiomyomas were retrieved. Procedure was not associated with any complications. The patient was discharged home, 48h after the procedure with no residual pain. In follow up, patient referred resolution of pelvic pain.

Conclusions

Multiple laparoscopic myomectomy can be performed by experienced surgeons, using techniques that reduce blood flow and improve exposure, thus reducing the probability of serious complications. Myomectomy is a definitive treatment for symptomatic leiomyomas, that preserves reproductive function and laparoscopic approach is feasible and it is associated with decreased pain, short hospital stay, rapid recovery and better cosmetic results.

<https://player.vimeo.com/video/266007283?autoplay=1>

Combined vaginal and laparoscopic approach to pelvic organ prolapse

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Background

We will introduce techniques for manage of pelvic organ prolapse and examine techniques to prevent recurrence.

Methods

From 1999 to 2017, 195 patients have undergone vaginal hysterectomy with anterior and posterior colporrhaphia followed by laparoscopic sacral colpopexy. We performed vaginal pelvic organ prolapse repair including Kelly's plication in anterior colporrhaphy in more than 1,012 cases. Of our cases we had very little prolapse at the anterior wall, instead vault prolapse more commonly occurred along with posterior wall decency. In one extreme case, bowel evisceration due to vault wall breakdown occurred. From this experience we developed a surgery where the vaginal vault and posterior wall could be reinforced with laparoscopic sacral colpopexy. In our sacral colpopexy, only a minimal amount of mesh is used to avoid vaginal erosion.

Results

The operative duration was 103±19minutes (mean) and the estimated blood loss was 82mL(0-600). No serious complications or blood transfusions have occurred to date. We have also experienced no erosion where mesh is exposed in the vagina. These patients were all able to ambulate the day following surgery. None of the patients have suffered recurrence.

Conclusions

This procedure was developed with the aim of preventing some of the complications, which we encountered in traditional POP surgery. This technique offers a patient friendly result as well as addresses the problem of recurrence.

<https://player.vimeo.com/video/269670113?autoplay=1>

Laparoscopic myomectomy of a big myoma using LigaSure™ Maryland Jaw with transitory clamp of bilateral uterine arteries

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Background

Uterine myomas, the most common benign gynecologic tumors, are an important issue in reproductive-age women evaluation. Symptoms, as abnormal uterine bleeding, anemia, pelvic pain or infertility problems, are present in a small portion of patients but sometimes they are an indication for surgical treatment.

Methods

A 29-year-old female reporting infertility was evaluated in CMIN's hospital. She had an ultrasound examination revealing a subserous fundal uterine leiomyoma measuring 6 cm, of International Federation of Gynecology and Obstetrics (FIGO) type 5. The patient was counseled and consented for laparoscopic myomectomy. Her medical history included a laser conization of the cervix because of a cervical intraepithelial neoplasia 2 in 2013, and further follow-up examinations with negative results.

Laparoscopic fibroid removing was performed, and to reduce the quantity of bleeding during the surgery temporary clamping of uterine arteries with titanium clips was settled. A one-step sealing procedure was possible due to a LigaSure™ Maryland Jaw use. After suturing the uterus, clips were removed. To remove the myoma we used laparoscopic power morcellation.

Results

The myoma was successfully excised laparoscopically, with no intraoperative or postoperative complications. Estimated blood loss was 70 cc. Final pathology: myoma, without malignancy.

Conclusions

Laparoscopic excision of uterine fibroids is feasible and safe, but preventive occlusion of both uterine arteries may lead to a safer laparoscopic myomectomy.

<https://player.vimeo.com/video/269750912?autoplay=1>

ES27-0206 - VP010
Video in Poster Session

Needleoscopic complete staging of borderline ovarian tumor

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Background

the main aim is to evaluate safety and technical feasibility of needleoscopic complete staging of borderline ovarian tumor (BOT). The secondary aim was to investigate post-operative pain and cosmetic results.

Methods

A 52-year-old patient with a right ovarian cyst suspected for BOT underwent a surgical staging including bilateral adnexectomy, total hysterectomy, infracolic omentectomy, peritoneal biopsies and peritoneal cytology. A 300 5 mm scope at umbilical level and one soprapubic 5 mm trocar for multifunction instrument were placed; two lateral pelvic 2.4 mm (alligator on the left and clutch on the right) needleoscopic instruments (MiniLap with MiniGrip handle by Teleflex, Morrisville, NC, USA) were used.

Results

Operative time was 100 minutes and estimated blood loss was less than 50 mL. The operation was performed successfully with no intraoperative or postoperative complications. Discharge time was 1 day. At the end of surgical procedure the incision's outer diameter was 3 mm. Visual Analogue Scale (VAS) score of patient post operative pain was 0/10 at 1h, 2/10 at 6 h and 0/10 at 24 h. The cosmetic result was satisfactory at 30-days postoperative follow-up.

Conclusions

The most recent advancement in the field of minimally invasive surgery is the Percutaneous Ultra-Mini invasive Access (P.U.M.A). This is the first case in literature reporting a needleoscopic complete surgical staging for BOT. Our experience with needleoscopic instruments could suggest this procedure as a viable alternative to standard laparoscopy for adnexal and/or uterine benign diseases.

<https://player.vimeo.com/video/269844543?autoplay=1>

ES27-0211 - VP011

Video in Poster Session

The way to display the chylous tubes and to prevent chylous leakage in laparoscopic para-aortic lymphadenectomy

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Background

This video shows the effective method of prevention of chylous leakage by displaying and clamping the chylous tubes in laparoscopic para-aortic lymphadenectomy.

Methods

Firstly oral administration of 100ml sesame oil was given on the night before the operation.

Results

The chylous tubes were fully displayed during the operation, and the chylous tubes were completely clamped in laparoscopic para-aortic lymphadenectomy.

Conclusions

Oral administration of sesame oil before operation is feasible and effective to display the chylous tubes and to prevent the chylous leakage in laparoscopic para-aortic lymphadenectomy.

<https://player.vimeo.com/video/269856654?autoplay=1>

Womb under my skin "Cystic parietal endometriosis"

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Background

Parietal endometriosis usually appears as soft fleshy masses, of yellowish or pinkish tissues. Sometimes red, or brown dots are seen, representing haemorrhages from the ectopic endometrium.

We report a case of a unique presentation of parietal endometriosis. A 34 years old lady, who previously has had 2 caesarean deliveries, presented with cyclic aching pain related to menses. She has had an ultrasound scanning that revealed normal pelvic structures, but showed a 8x5 cm echogenic lesion that was suggestive of subcutaneous endometrioma.

Methods

We proceeded for opening the previous CS scar at the site of the parietal mass. It was a heterogenous 15x8 cm mass, reaching down to the rectus sheath. It had fleshy solid areas, alternating with multi-locular cystic parts. The largest of which was an 11x7 cm cyst, containing 300 ml of chocolate material, another smaller 4x3 cm cyst was also found, with 3 smaller 1-2 cm solid nodules. The mass looked almost like a hematometra!

The remainder of the cysts were also drained and the whole mass was excised. The abdominal wall was then re-sutured in layers.

Results

Histopathological examination confirmed the endometriotic nature, with the classical picture of endometrial glands and stroma embedded into the subcutaneous fat. The patient reported complete resolution of her symptoms after the procedure.

Conclusions

Parietal endometriosis is considered to be on the rise now, as the CS rates continue to rise. The operative findings usually consist of a fleshy mass embedded in the subcutaneous fat.

The case we present had a peculiar appearance with a large subcutaneous cyst of chocolate material. It looked as if the patient has had a "womb under her skin"!

<https://player.vimeo.com/video/269857172?autoplay=1>

Laparoscopic culdocele repair via moschcowitz culdoplasty procedure

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Background

A step-by-step explanation of the laparoscopic management of the culdocele repair via Moschcowitz culdoplasty procedure (instructive video).

Methods

A 47-year-old woman with four spontaneous vaginal deliveries was referred to our clinic with palpable tissue protrusion from vagina, discomfort on sitting and pressured with bowel movements.

She had been treated by laparoscopic hysterectomy and pectocolpopexy due to descensus uteri three years ago. On gynecologic examination, the uterus was absent, POP-Q examination revealed good apical support. Weakness of pubovisceral muscles were determined by static sequence protocol (T2-weighted images in sagittal, sagittal and axial plane). Moschcowitz culdoplasty procedure was planned. The procedure began with vaginal approach, the prolapsing mass was dissected away from the posterior vagina, in further dissection peritoneal sac was opened. Decision was made to performed laparoscopy with two reasons. First reason was her prior mesh pectocolpopexy surgery and the second was the surgeon was not make sure reaching the sacrouterine ligaments (they were erased and weakened). Bilateral ureters were identified and dissected. Dissection was carried out into the rectovaginal space and rectosigmoid colon was freed. The extensive and relaxed peritoneal tissue was cut away. Purse-string 2-0 Vicryl suture (90 cm, polyglactin 910; Ethicon Endo- Surgery, Norderstedt, Germany) was placed to closed peritoneum and cul-de-sac. With using 2-0 Vicryl, the purse-string sutures were placed to the Moschcowitz fascia. The epiploicae and serosal layer of the sigmoid colon were sutured to the lateral and anterior wall of the peritoneum. The purse-string 2-0 polypropylene sutures were placed to suspend the sacrouterine ligament to the vaginal vault.

Results

The total operation time was 85 minutes and the hospital stay was 48 hours. There were no complications during and after surgery. She had no recurrence and gastrointestinal symptoms for two-year period.

Conclusions

Laparoscopic management of the culdocele via Moschcowitz culdoplasty procedure may observed as a safe, feasible and effective surgical procedure with a high success rate and low recurrence rate. This technique can eligible to determine surgeon the ureters, sacrouterine ligaments and the bowels under the laparoscopic vision.

Laparoscopic repair of uterotubal fistula, an unexpected cause of infertility

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Background

Utero-tubal fistula is a uncommon complication which was reported after pelvic inflammatory infections before. In this case we report an uncommon complication of dilatation and curettage, a tubo-uterian fistula. Our case was diagnosed by laparoscopy incidentally during assessment of infertility.

Methods

A 29-year-old female patient with 5 years of secondary infertility was admitted to our clinic. She did not have a history of pelvic infections or surgery except for a dilatation and curettage (D&C) for three times between 2015 and 2016 at a different center. On transvaginal ultrasound examination the uterus and bilateral ovaries appeared normal. A hysterosalpingographic examination demonstrated dilated right tube, and on laparoscopy the right fallopian tube was seen to be densely adhered to the posterior uterine wall which can be result of perforation during curettage. No passage could be observed after methylene blue injection on that side. The tube adhering to the uterine wall were detached and the the fistula tract was seen and sutured. In this case our patient got pregnant after six months from laparoscopy.

Results

Presentation of a case diagnosed as having Utero-tubal fistula during laparoscopic operation because of secondary infertility with a history of dilatation and curettage.

Conclusions

Medical history is of great importance during infertility investigation and may reveal some unexpected conditions.

<https://player.vimeo.com/video/269924508?autoplay=1>

ES27-0242 - VP015

Video in Poster Session

Complex ovarian torsion

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Background

Ovarian torsion can occur in 5-15% of cases and can be complicated by previous complex surgery and adhesion formation. This video demonstrates the steps that can be adopted in managing such cases.

Methods

A 50 Year old patient presented to another hospital with an acute right sided adnexal torsion. She has a history of a right pelvic renal transplant for ANCA vasculitis, Ventriculo-Peritoneal shunt for hydrocephalus secondary to an acoustic neuroma, 2 caesarean sections and tubal ligation. Imaging revealed a complex ovarian cyst and CA125: 200. She was therefore transferred to our centre for management. Following counselling she opted for a laparoscopic bilateral salping-oophorectomy.

Results

Such complex cases are becoming more common given the nature of conditions and operations now possible. This video demonstrates that minimally invasive techniques are still possible and preferred.

Conclusions

Laparoscopic surgery is the preferred technique to manage such acute conditions.

<https://player.vimeo.com/video/269927332?autoplay=1>

ES27-0355 - VP016

Video in Poster Session

Laparoscopic adhesiolysis of dense pelvic adhesions

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Background

A 51 years-old woman with a history of one caesarian section and one open myomectomy and a BMI of 26 was diagnosed with a 7x4,5 cm left ovarian cyst, confirmed by ultrasound and MRI, underwent laparoscopic bilateral salpingo oophorectomy.

The operating time was 120 minutes and the blood loss was approximately 150 ml.

Methods

Laparoscopic adhesiolysis of dense pelvic adhesions for left ovarian cyst.

Results

Histopathology: ovarian cystadenoma. The patient was discharged on day one with the only instruction to be on a light diet for the next three (3) days.

Conclusions

Preference of laparoscopic surgery approach instead of open surgery in order to avoid dense adhesions. Pelvic adhesions after open surgery cause serious difficulties during surgery by increasing time surgery and probability of complications.

<https://player.vimeo.com/video/271648345?autoplay=1>

ES27-0419 - VP017

Video in Poster Session

Hysteroscopic treatment of cesarean scar defect

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Background

To demonstrate our experience with hysteroscopic treatment of cesarean scar defect (CSD).

Methods

The hysteroscope was introduced under direct visualization, and after determining the location of the defect, a cutting loop was used to remove the fibrotic tissue flap under the pouchlike defect, from the bottom of the defect to the endocervical canal. And the niche surface will be superficially coagulated. Polyps and cysts in the niche were resected. Abnormal vascular patterns and endometrium were coagulated thoroughly.

Results

-

Conclusions

Hysteroscopic niche treatment reduced postmenstrual spotting and spotting-related discomfort.

<https://player.vimeo.com/video/272889963?autoplay=1>

ES27-0429 - VP018

Video in Poster Session

Ectopic pregnancy - conserving & repairing the tube

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Background

Ectopic pregnancy sometimes requires surgical intervention and management. Laparoscopy is the established gold standard for the surgical management of ectopic.

However, the surgical concepts in managing the tube has evolved constantly. We present the principles that we follow, removing the ectopic from the tube and repairing the tube at the same time.

Methods

The ectopic pregnancy which requires surgical intervention is managed by laparoscopy. We use vasopressin diluted in normal saline into the broad ligament or the infundibulo-pelvic ligament area to prevent the blood loss during the surgical management.

The ectopic is removed. Tube is assessed. Tubal repair if required is carried out. Thereby preserving the tube and the patency.

Results

Ectopic removal and tubal repair is conveniently possible in the same sitting. It helps to give a better outcome for the tubal patency post operatively.

Conclusions

Tubal repair and tubal conservation after an ectopic removal allows the patient to have a chance for normal conception. There is a definitive increase in the risk of the repeat ectopic. But since the risk is expected, the subsequent management, if the repeat ectopic does happen, will be medical management due to early identification.

<https://player.vimeo.com/video/272634240?autoplay=1>

Transvaginal notes for adnexal procedures

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Background

Natural Orifice Transluminal Endoscopic Surgery (*NOTES*) is a minimally invasive surgery *approach* using body natural orifices to access the peritoneal cavity, leaving no visible scars. In spite of being technically challenging, in experienced hands *NOTES* appears to be a feasible technique to several surgical procedures, with less post operative complications, pain and better overall patients satisfaction. There is few published information about pure transvaginal *NOTES* (*vNOTES*) for gynaecological procedures.

Methods

The authors describe their surgical technique used in *vNOTES* for adnexal procedure. Through a small 3 cm smile shape incision at the cul-de-sac and a 3-way port device the surgeon is able to reach both abdominal and pelvic cavities, and may dissect, cut, coagulate, insert material and remove specimens through the same port. After the procedure, a direct running suture is performed to close the culdotomy, as for conventional vaginal surgery.

Results

Even though *NOTES* requires a demanding learning process, in experienced hands it is a desirable approach to the adnexa. After several surgeries, our technique has been improved, becoming safer and more simple.

Conclusions

vNOTES seems to be a safe and desirable approach to the adnexa, with evident advantages comparing to conventional laparoscopy

<https://player.vimeo.com/video/272642602?autoplay=1>