

An overview of International AUB/HMB Guidelines*

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Abstract

Abnormal uterine bleeding (AUB) is estimated to affect approximately 3-30% of women in their reproductive years. There are a number of guidelines from national societies and organisations on this subject. Many aspects of the available guidelines are in agreement with each other, probably due to the use of same published evidence. However, this article demonstrates that there are also major differences on certain subjects. These are likely to be a reflection of variations in clinical practice in different countries, as the differences are difficult to explain with emergence of new evidence. Guidelines aim to improve patient care by informing clinical practice, to reduce unwarranted variability and to expedite implementation of effective intervention. The similarities between the guidelines give an opportunity to create international guidelines which may be more influential globally. Such a document would be more widely accepted by the clinicians and women alike, potentially reduce variability of access to the best treatments available and improve the lives of sufferers.

Keywords: Abnormal uterine bleeding, heavy menstrual bleeding, guidelines.

Introduction

Abnormal uterine bleeding (AUB) is estimated to affect approximately 3-30% of women in their reproductive years. These figures mostly come from studies on heavy menstrual bleeding (HMB), hence the real prevalence may be higher (Munro et al., 2018). AUB is the leading reason for gynaecological consultations. As a result, a number of national societies and organisations have prepared guidance to clinicians on this subject. Guidelines for clinical practice are systematically developed statements to help healthcare professionals and affected people make decisions about appropriate care for specific clinical circumstances. Their purpose is to improve patient care by informing clinical practice, to reduce unwarranted variability and to expedite implementation of effective intervention.

Many aspects of the available guidelines are in agreement with each other although there are some differences. This similarity is not surprising as most guidelines use the same published evidence, and the differences may be a reflection of the variation

in clinical practice in individual countries and new evidence which may have come up since publication of some of these guidelines. It is also possible that there may be differences amongst the underlying causes of AUB or women's preferences of treatment may vary reflecting cultural differences. A list of some of the major international guidelines is given in Table I.

Guidelines on AUB/HMB cover diagnosis and/or management. Older guidelines were mostly written by 'expert committees' in a narrative review style, whereas more recent guidelines have a structured methodology which include a systematic literature search to answer structured questions (PICO – patients, intervention, comparison, outcome) which have been determined by stakeholders, eventually leading to a number of evidence based statements after review of the relevant articles by the guideline development group (GDG). The GDG usually consists of a multidisciplinary team including patient representatives.

This article will give a comparative description of the most recent major guidelines on AUB or HMB

Table I. — List of some of the available guidelines on abnormal uterine or heavy menstrual bleeding.

- CNGOF (College National des Gynecologues et Obstetriciens Francais), Management of women with abnormal uterine bleeding: Clinical practice guidelines of the French National College of Gynaecologists and Obstetricians (CNGOF), 2023 (Brun et al., 2023)
- NICE (National Institute for Health and Care Excellence) Guideline, Heavy menstrual bleeding: assessment and management, 2018 (NICE, 2018)
- NHG – (Nederlands Huisartsen Genootschap - Dutch College of General Practitioners), NHG-Standaard Vaginaal bloedverlies, 2014, updated in 2023 (NHG, 2014)
- NVOG- (Nederlandse Vereniging voor Obstetrie en Gynaecologie – Dutch College of Obstetrics and Gynaecology) – Heavy menstrual bleeding, 2013, updated in 2023 (NVOG, 2013)
- Australian Commission on Safety and Quality in Health Care – Heavy menstrual bleeding Clinical Care Standard, 2017
- DGGG (Deutsche Gesellschaft für Gynäkologie und Geburtshilfe), Indikation und Methodik der Hysterektomie bei benignen Erkrankungen, 2015 (DGGG, 2015)
- SEGO (Sociedad Española Ginecologica y Obstetrica), Heavy menstrual bleeding, 2013 (SEGO, 2013)
- SIGO (Società italiana di Ginecologica e Ostetricia) Recommendations on diagnostic and therapeutic approaches for heavy menstrual bleeding, 2006 (SIGO, 2006)
- SOGC (Society of Obstetricians and Gynaecologists of Canada), Abnormal uterine bleeding in premenopausal women, 2018 (Singh et al., 2018)
- ACOG (American College of Obstetricians and Gynecologists) Committee Opinion: Management of acute abnormal uterine bleeding in non-pregnant reproductive-aged women, 2013 (ACOG, 2013)

from Canada, France, the Netherlands and United Kingdom to highlight main points of agreements and differences in diagnostic and therapeutic approaches to AUB. The references for these guidelines can be found in Table I or when they are first mentioned in the text and the details are in the reference list.

Diagnosis

History

There is overall agreement in most evidence based guidelines that a detailed history should be taken to aid diagnosis. This should include duration and nature of AUB, details of menstrual cycles and presence or absence of associated symptoms such as pain, urinary symptoms. There is however disagreement on the use of assessment of menstrual blood loss. Whilst the Dutch general practitioners NHG (Nederlands Huisartsen Genootschap) guideline and French CNGOF (College National des Gynecologues et Obstetriciens Francais) guidelines (NHG, 2014; Brun et al., 2023) recommend use of pictorial blood loss assessment charts (PBAC) when there is diagnostic doubt, the United Kingdom NICE (National Institute for Health and Care Excellence) guideline (NICE, 2018) does not recommend their routine use. French CNGOF guidelines (Brun et al., 2023) also suggest that they should be used in adolescents. NICE guidelines suggest that the woman herself should decide if the menstrual

blood loss is a problem and if it affects her quality of life. Canadian SOGC (Society of Obstetricians and Gynaecologists of Canada) guidelines do not make a recommendation on the use of PBAC (Singh et al., 2018).

Physical examination

SOGC and CNGOF guidelines recommend a general physical and a gynaecological examination with a speculum to rule out a lower genital tract pathology. NICE and NHG guidelines take a more a selective approach; the former recommend a physical examination when structural abnormalities are suspected, and before arranging further investigations or a levonorgestrel-IUS (LNG-IUS) is fitted, and the latter state that speculum and bimanual examinations can be omitted in low risk women for a genital pathology. NICE guidelines also indicate that pharmaceutical treatment can be started without an examination if a structural or histological abnormality is not suspected from the woman's history. There is overall agreement that physical examination is a useful tool for diagnosis and that vast majority of women, if not all, should be examined to establish diagnosis and guide treatment.

Ultrasound examination

Similar to the approach to physical examination, there are subtle differences between the French guidelines and the other three guidelines from

the Netherlands, Canada and United Kingdom. CNGOF guidelines imply that all women presenting with AUB have an ultrasound examination as the first line imaging investigation. NICE and SOGC guidelines advocate using ultrasound when the uterus is palpable abdominally, when examination reveals a structural abnormality or if pharmaceutical treatment fails. Dutch NHG guidelines also suggest arranging a transvaginal ultrasound examination if vaginal examination is abnormal. These differences imply that medical treatment can be initiated for AUB without an ultrasound examination according to the NICE and NHG guidelines, whilst French guidelines indicate that an ultrasound should be performed to rule out a structural abnormality.

Hysteroscopy and endometrial biopsy

There are significant differences amongst the guidelines evaluated in this article. The NICE HMB guideline advocate a 'fast track' approach to outpatient hysteroscopy and endometrial biopsy in women who have persistent intermenstrual or irregular bleeding, obesity or polycystic ovary syndrome, in women who are on tamoxifen or who have not responded to medical treatment for HMB and in women with suspected submucosal fibroids, endometrial polyps or other endometrial pathology. In their flowchart, this recommendation comes without an initial ultrasound examination.

In contrast the CNGOF guidelines take a more conservative approach towards hysteroscopy and advise that hysteroscopy should not be routinely used when the ultrasound examination enabled diagnosis of an intracavitary pathology and should only be used when the ultrasound diagnosis is doubtful. It also suggests sonohysterography as an alternative to hysteroscopy. In a separate recommendation, the French guidelines advise that endometrial biopsy should be taken in adult women when the endometrial thickness is over 15 mm, or in the presence of a risk factor for endometrial cancer such as perimenopause, high body mass index, diabetes, nulliparity or genetic risks.

The Canadian SOGC guidelines suggest hysteroscopy as an option in selected patients to visualise intracavitary pathology along with saline infusion sonohysterography and take direct biopsies when necessary. They recommend endometrial biopsy in women over age 40 years, in those with increased risk of endometrial cancer (age, obesity, nulliparity, PCOS, diabetes, HNPCC) and in the presence of intermenstrual bleeding, infrequent menses suggestive of anovulatory cycles or when medical treatment fails.

The Dutch NHG guidelines suggest considering

hysteroscopy or transvaginal contrast sonography if there is no response to medical treatment or if the woman is on tamoxifen. Similarly the Dutch NVOG- (Nederlandse Vereniging voor Obstetrie en Gynaecologie) guidelines on heavy menstrual bleeding do not recommend routine hysteroscopy with normal saline or gel instillation sonography (NVOG, 2013).

The differences between the British and other guidelines may be a reflection variations in clinical practice in these countries. The majority of guidelines preserve hysteroscopy for specific situations and heavily rely on ultrasound and endometrial biopsy, whereas the British guidelines have a more liberal approach to outpatient hysteroscopy, even without an ultrasound examination.

Treatment

Treatment options have been outlined in the guidelines – except the SOGC guidelines- in two separate groups depending on presence or absence of an underlying pathology (structural abnormality). The NICE guidelines include women with small (<3 cm) non-cavity distorting fibroids and adenomyosis in the group without an underlying pathology. All four guidelines specify first and second line treatment options and make separate recommendations who have presence or absence of desire for pregnancy in the immediate or long term future (Table II and Table III).

AUB/HMB in the absence of a structural abnormality including those with small non-cavity distorting fibroids and adenomyosis

There is overall agreement that LNG-IUS should be offered as the first line treatment to this group of women when there is no immediate desire for pregnancy, except the Canadian SOGC guidelines which do not indicate a preference order for non-surgical treatments. The CNGOF guidelines make distinction between women age under and over 42 years when they no longer desire pregnancy; LNG-IUS 52 mg is the first line treatment but over the age 42 years they recommend endometrial ablation due to lower side effect rates.

When LNG-IUS is not acceptable or is unsuitable other first line treatment options include tranexamic acid and nonsteroid anti-inflammatory drugs (NSAIDs). In the NICE guidelines, combined hormonal contraceptives (CHC), progesterone only contraceptives and progestins are recommended alternative first line treatment options for women who do not wish to become pregnant. NHG guidelines also include CHC and progestins as alternatives to LNG-IUS, whereas

Table II. — Treatment options for AUB/HMB in the absence of an underlying pathology.

	United Kingdom	The Netherlands	France	Canada
First line	LNG-IUS	LNG-IUS	Age <42 years LNG-IUS Age > 42 years EA	Tranexamic acid, NSAIDs, CHC, DMPA, LNG-IUS
	Tranexamic acid, NSAIDs	Tranexamic acid, NSAIDs	Tranexamic acid, NSAIDs	
	CHC, Progestins	CHC, Progestins		
	Progesterone only contraceptives			
Second line	SEAT	SEAT	Endometrial resection or ablation	SEAT
	Hysterectomy	Hysterectomy	Laparoscopic or vaginal hysterectomy	Hysterectomy
LNG-IUS: Levonorgestrel intrauterine system, DMPA: Depot medroxyprogesterone acetate, EA: Endometrial ablation, NSAIDs: nonsteroid anti-inflammatory drugs, SEAT: second generation endometrial ablation therapies				

these are not included in the CNGOF guidelines. SOGC guidelines advise against use of cyclical progestins due to lack of efficiency in the literature.

Second line treatment options for women who no longer have future fertility plans are endometrial resection/ablation or hysterectomy. Both the NICE and NVOG guideline specifically recommend second generation endometrial ablation therapies (SEAT), whereas CNGOF include both endometrial resection and ablation options. French guidelines specify that if hysterectomy is chosen, laparoscopic or vaginal route should be preferred, however, the NICE guidelines suggest that the woman's preferences should be taken into account on the type of hysterectomy. French guidelines make a strong recommendation that hysterectomy can be offered to women who are eligible to have surgical treatment if there is no desire to preserve the uterus, but in contrast NICE guideline suggests that hysterectomy should not be offered as a first line treatment.

AUB/HMB due to a structural uterine pathology

The guidelines cover a number of structural abnormalities which may cause AUB or HMB and include polyps, fibroids, hyperplasia and malignancy. These abnormalities are classified in the FIGO classification system as PALM-COEN (Munro et al., 2018).

NVOG guidelines do not routinely recommend removal of polyps for HMB, although its benefit in treating intermenstrual bleeding is acknowledged. Same guidelines suggest that polyp removal should preferably be performed within an outpatient setting, depending on the size of polyp and experience of the clinician. Polyps do not feature amongst the treatment recommendations

in the NICE HMB guidelines, their diagnosis by ultrasound and hysteroscopy is extensively covered in the diagnosis section. French CNGOF guidelines take a very different approach to endometrial polyps; whilst they recommend polyp resection as a sole procedure in women with current or future desire for pregnancy, first or second generation endometrial ablation in combination with polyp resection is recommended in women who have no desire for pregnancy.

There is overall agreement that submucosal fibroids should be removed at hysteroscopy. The NVOG guidelines suggest hysteroscopic myomectomy for submucosal fibroids of up to 4 cm. The CNGOF guidelines do not specify the size of fibroids but recommend fibroid resection for type 0-2 submucosal fibroids. The NICE guidelines include a recommendation of fibroid resection for fibroids smaller than 3 cm causing HMB, however there is no separate statement for larger submucosal fibroids.

For other fibroids the treatment option that have been considered in the guidelines include myomectomy, uterine artery embolisation (UAE) and hysterectomy, in addition to symptomatic hormonal or non-hormonal treatment options discussed in the previous section (LNG-IUS, Tranexamic acid, NSAIDs, CHCs and progestins). The Dutch NVOG guidelines advocate myomectomy instead of UAE in women with a wish to future pregnancy. Both the Dutch NVOG and French CNGOF guidelines indicate that UAE and hysterectomy have similar 5 year quality of life and satisfaction rates but higher re-interventions rates following UAE should be taken into account during the decision making process with the woman. The French CNGOF guidelines indicate

Table III. — Treatment options for AUB/HMB secondary to uterine pathology.

	United Kingdom	The Netherlands	France	Canada
Endometrial polyps	No recommendation	Do not routinely remove polyps for HMB, but remove for IMB Polyp removal preferably in outpatient setting	Polyp resection when pregnancy desired Polyp resection in combination with FEAT or SEAT when pregnancy not desired	Polyp removal
Submucosal fibroids	Fibroid resection when < 3 cm	Fibroid resection when < 4 cm	Fibroid resection for type 0-2 fibroids	Fibroid resection
Other fibroids	Tranexamic acid, NSAIDs, LNG-IUS, CHC, progestins SEAT when pregnancy not desired Myomectomy or UAE when pregnancy desired Hysterectomy	LNG-IUS when future pregnancy is desired SEAT when pregnancy not desired Myomectomy when pregnancy desired UAE when pregnancy not desired Hysterectomy	LNG-IUS when pregnancy desired EA when pregnancy not desired Myomectomy or UAE when pregnancy desired Hysterectomy	Myomectomy, UAE, hysterectomy
Adenomyosis	Tranexamic acid, NSAIDs, LNG-IUS, CHC, progestins, progesterone only contraceptives	No recommendation	LNG-IUS when pregnancy desired FEAT or SEAT when pregnancy not desired but wish to preserve uterus Hysterectomy	
LNG-IUS: Levonorgestrel intrauterine system, EA: Endometrial ablation, NSAIDs: nonsteroid anti-inflammatory drugs, SEAT: second generation endometrial ablation therapies, FEAT: first generation endometrial ablation/resection therapies.				

that both myomectomy and UAE can be offered to women who desire pregnancy but they should be informed of uncertainties about the impact of UAE on subsequent fertility and risk of miscarriage. The NICE guidelines recommend that both myomectomy and UAE can be considered in these women without any warning on future fertility. Both the NICE and CNGOF guidelines indicate that endometrial ablation can also be considered before hysterectomy in women who no longer desires pregnancy when the uterus is smaller than a certain size (no larger than 10 weeks in NICE and when hysterometry is < 12 cm in CNGOF guidelines).

Treatment options for adenomyosis are included in the group with no underlying pathology in the NICE guidelines. The NVOG guidelines do not cover adenomyosis separately but state that UAE for adenomyosis should only be performed in research settings. The CNGOF guidelines recommend LNG-IUS as first line treatment when fertility or uterine preservation is desired,

endometrial resection or ablation to those who do not want to become pregnant but wish to preserve their uterus and hysterectomy when there is no desire to preserve fertility/uterus. They did not make a specific recommendation on UAE for adenomyosis related AUB but indicated that it can be considered.

Conclusions

There are a number of available national guidelines on the assessment and/or management of AUB or HMB. The scope, length and details of these documents and the way they are structured vary considerably. Guidelines that have been prepared more recently tend to have a defined methodology in line with internationally agreed standards on evidence based guideline development. The guidelines use the same published evidence on most clinical questions or conditions, hence there is an overall agreement between the majority of the guidelines. However, as outlined in this article,

there are also major differences on certain subjects. These are likely to be a reflection of variations in clinical practice in different countries, as the differences are difficult to explain with emergence of new evidence. The guidelines that have been summarised and compared in this article were mostly prepared in the last 10 years and were mostly updated in the last 5 years. Hence the evidence they looked at would have been very similar.

The similarities between the guidelines give an opportunity to create international guidelines which may be more influential globally. Such a document would be more widely accepted by the clinicians and women alike, potentially reduce variability of access to the best treatments available and improve the lives of sufferers. Benefits of such global documents can be seen in the example of the FIGO PALM-COEIN classification which are now widely used. A similar approach to management of AUB/HMB can have the same impact globally. However, as outlined in the current articles, there are a number of challenges in creating such a guideline including financial costs, logistical difficulties in arranging participation from all parts of the world and linguistic challenges. Major international societies and their collaborations may be able to find a way forward to achieve this task.

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