

CASE DISCUSSION: HEAVY MENSTRUAL BLEEDING IN PRIMARY CARE AND BEYOND

Heavy menstrual bleeding (HMB or menorrhagia) is a common complaint in primary care and the fourth most common reason for referral to gynaecological secondary care. Each year in England and Wales more than 30,000 women undergo surgical treatment for heavy menstruation.¹ Here, the authors explore what can be learned from a typical case study.

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Subjectively, and for clinical purposes, HMB is defined as “excessive menstrual blood loss which interferes with the women’s physical, emotional, social and material quality of life (QOL)”². From a practical perspective women usually describe:

- Flooding through clothes/bedding
- Passage of large clots
- The need for double sanitary protection (tampons and pads)

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- Frequent changing of sanitary protection.

Objectively, from an academic perspective, HMB is a menstrual bleed of >80mls of blood (2 standard deviations from the mean). However this is not clinically useful and has been shown to correlate poorly with women’s own interpretation of “heavy periods”.³

The extent to which a woman’s quality of life can be affected by HMB is often underestimated by clinicians and surprisingly often accepted by the woman herself. This latter point may be because of what family or friends have experienced or, in the older age group, the expectation that the menopause is imminent. These patients should be aware the average age of the menopause in the UK is 51 years but up to 56 years is within the normal range.

Regarding morbidity of HMB, it is helpful to consider patients with three days of menorrhagia, enough to curtail a patient’s normal activities, translates into a whole month a year of reduced QOL. Few other conditions with this amount of morbidity would be acceptable in otherwise fit and healthy women of reproductive age. A significant proportion of patients with HMB can be managed solely in primary care.

The risk of cancer is fortunately very low in patients presenting purely with HMB to primary care. Of these patients the likely rates of endometrial cancer per 10,000 primary care consultations have been calculated as followed.²

Age range (years)	30-34	35-39	40-44	45-49
Rate of endometrial cancer per 10 000 consultations	1	1	3	8

Additional symptoms, such as irregular vaginal bleeding, increase these risks and early referral should be made as per NICE referral guidelines for suspected cancer.⁴

Causes

Between 40% and 60% of cases of HMB are idiopathic. Others include:

- Fibroids, endometrial polyps, endometrial hyperplasia/neoplasia
- Endometriosis, adenomyosis, pelvic inflammatory disease (PID)
- Endocrinological: PCOS, hypothyroidism
- Coagulopathy related (e.g. Von Willebrand disease)
- Iatrogenic (non-hormonal coil – up to 40-50% increase in menstrual loss, anticoagulant therapy etc.

CASE REPORT: APPOINTMENT 1

Mrs SB is a 42-year-old mother of two who presents to her GP with two years of increasing HMB and severe dysmenorrhoea. She reports bleeding for six days every 30 days with associated flooding and clots for four days. For two days a month, she is essentially housebound. Her dysmenorrhoea is flow related commencing on day 1 and eases on day 5. She has no intermenstrual or post-coital bleeding and is up to date with her cervical smears. She uses condoms for contraception and is unsure about further future pregnancies. Mrs SB takes regular ibuprofen and paracetamol for her dysmenorrhoea. She has no other medical history of note.

Initial steps

History: Nature of bleeding, presence of other symptoms suggestive of co-morbidity (e.g. endometriosis/fibroids), impact on quality of life

Examination: Not required as no suggestion of structural or histological abnormality.

Investigation: Full blood count only (Hb-130g/dl).

Management: Tranexamic acid 1gm po QDS at onset of menstruation. Option of levonorgestrel-releasing intrauterine system (LNG-IUS) discussed. Patient declines at present. Written information is provided regarding management of HMB.²

APPOINTMENT 2

Mrs SB returns four months later. Initially tranexamic acid helped but symptoms have returned with subsequent worsening quality of life. She requests LNG-IUS.

Examination: Now obligatory prior to LNG-IUS fitting. Examination shows an irregularly enlarged anteverted uterus, approximately 10-week size. In view of this finding patient is referred for a pelvic scan prior to LNG-IUS insertion.

APPOINTMENT 3

Mrs SB returns following her pelvic ultrasound, which shows normal ovaries a bulky anteverted uterus with a 2.5cm sub-serosal fibroid. The endometrium appears normal and is consistent with a last menstrual period four days previously. An LNG-IUS is inserted by the GP uneventfully.

APPOINTMENT 4

Mrs SB returns three months later. In the interim, she has had her coil threads checked at six weeks. Mrs SB has noticed a significant reduction in the flow of her menstrual cycle with no further flooding and clots but has been bleeding continuously since coil insertion. This is a significant issue for Mrs SB. A trial of a low dose combined oral contraceptive pill (COCP) for three months is suggested.

APPOINTMENT 5

Mrs SB returns four months later. The COCP has worked well in regulating her bleeding but she has reverted to continual bleeding on its cessation. Mrs SB does not want to continue talking "so many hormones" and discusses surgical options with the GP. She is referred to secondary care.

SECONDARY CARE

Mrs SB is referred to a dedicated menstrual disorders clinic in secondary care where she had an uneventful outpatient hysteroscopy and normal endometrial biopsy. Having previously decided her family was now complete, she subsequently has a daycase hydrothermal endometrial ablation with replacement LNG-IUS for contraception. At 1 year follow-up she is amenorrhoeic.

Discussion

Mrs SB's history and subsequent management is relatively typical of women presenting with HMB to primary care.

She was started on tranexamic acid (an antifibrinolytic) – appropriately, as she had declined an LNG-IUS – and had been made aware of the potential side-effects of indigestion, diarrhoea, leg cramps and headache. Tranexamic acid reduces mean blood loss by approximately 50% in patients but has no direct analgesic effects *per se*.² She experienced the commonplace scenario of obtaining a relatively short-lived symptom improvement.

Mrs SB had five GP appointments over more than a year prior to referral to secondary care. This may seem unusual but in this case is as

a result of having a GP with a particular interest and expertise in managing menstrual disorders. Data from a recent HMB audit⁵ show that in 2011-2012, of 15,812 patients 74% had symptoms for over a year before referral and 16.4% had more than four GP visits – the latter increasing to 28.7% if <35 years of age and decreasing to 11.7% if >50 years.

The COCP is often erroneously considered to be contraindicated in older women. Assuming no other additional risk factors for VTE, other than age, is present, it can be a very effective form of period control in terms of heaviness and cycle predictability.

Mrs SB's pelvic ultrasound was reassuring. Fibroids are a commonplace finding with 25% of women over the age of 25 having some ultrasonographically demonstrable fibroids. Sub-mucosal fibroids of any size may cause HMB because of the increased surface area of endometrium from which menstruation occurs. Those sub-mucosal fibroids of >3cm are increasingly likely to cause difficulty with coil insertion. Conversely small <3cm sub-serosal fibroids are very unlikely to cause any difficulty with a coil insertion. Ultrasound reports should routinely include endometrial thickness (ET) measurement. This should be between 6-14mm depending on the stage of the menstrual cycle. Endometrial thickness greater than this is more likely to be indicative of endometrial pathology such as polyp(s) or endometrial hyperplasia/neoplasia. Ultrasound scan reports may describe the ET as "double endometrial thickness" which rather confusingly is exactly the same as "endometrial thickness".

The extent to which a woman's quality of life can be affected by HMB is often underestimated by clinicians

Mrs SB was fortunate to have a dedicated local menstrual disorders clinic, which she was referred to. Under general anaesthetic, she had a second generation endometrial ablation procedure – hydrothermal endometrial ablation (HTA™). This technique allows visualisation of the uterine cavity while circulating heated water ablates the endometrium. The procedure causes few, if any, intrauterine adhesions when compared with other techniques such as Novasure™ or rollerball endometrial ablation. Because of this, inserted coils used for contraception can be removed easily when required.

Mrs SB did not consider a hysterectomy as an "acceptable" option for her symptom control. Although NICE guidance states: "Hysterectomy should not be used as a first-line treatment solely for HMB", it is essential that the choice of management, following a full and frank discussion, rests with the patient. Clinicians in secondary care and patients should have the option to refer for a second opinion "where agreement on treatment options for HMB is not reached".²

Frequently asked questions

When do I need to examine a patient?

Generally an abdominal/vaginal examination is not necessary unless symptoms suggest a structural abnormality (e.g. fibroids causing pressure symptoms) or a histological abnormality (intermenstrual or post-coital bleeding). Examination is obligatory prior to LNG-IUS fitting.²

When should patients have an endometrial biopsy?

Indications include: patients with persistent intermenstrual bleeding, women over the age of 45, if there has been failed medical treatment² and patients with additional risk factors for endometrial cancer⁶ such as:

- Obesity (BMI > 30 kg/m²),
- Nulliparity
- PCOS
- Diabetes
- Hereditary non-polyposis colorectal cancers (family or personal history)

If focal endometrial lesions are suggested from a pelvic ultrasound referral for outpatient hysteroscopy guided biopsy is appropriate.⁴

What blood tests should I do in primary care?

Only a full blood count. If the haemoglobin is found to be low (<120g/dl), then a serum ferritin assay is appropriate.²

Thyroid function tests (TFTs) should not be done unless there are other clinical findings suggestive of thyroid disease. It should be remembered that symptoms of hypothyroidism can mimic peri-menopausal symptoms, e.g. oligomenorrhoea, lethargy etc. In these cases TFTs should be considered.

Coagulation disorders (i.e. Von Willebrand disease) should only be investigated if there is either a history of menorrhagia from menarche or personal or family history of bleeding tendencies².

Follicle stimulating hormone (FSH) assays should not be routinely undertaken. (See Figure 1)

When should I consider organising a pelvic ultrasound?

Imaging should be undertaken in the following circumstances:²

- The uterus is palpable abdominally
- Vaginal examination reveals a pelvic mass of uncertain origin
- Pharmacological treatment fails.

When should I refer into secondary care?

Key criteria for referral include:

- Failed medical treatment: When a first but preferably second-line pharmaceutical treatment has proved ineffective

- Possible histological abnormalities (including malignancy): e.g. persistent intermenstrual bleeding, focal endometrial pathology i.e. polyps suggested from pelvic ultrasound
- Possible additional pathology: e.g. endometriosis, fibroids (if palpable abdominally, intra-cavity or uterine cavity >12cm at ultrasound or uterine sounding)
- On patient request

What generally happens to patients referred to secondary care?

In the first HMB audit 2011 (RCOG/LSHTM),¹ 38% of patients referred to secondary care had some form of surgical management with approximately two thirds having an endometrial ablation (EA) and the remaining one third having a hysterectomy.

Endometrial ablation techniques can provide amenorrhoea rates of up to 40%, and when compared to hysterectomy EAs are associated with quicker procedure times and fewer complications. However – and possibly rather surprisingly – EAs are associated with significantly reduced patient satisfaction at 12 and 24 months and significantly worse QOL scores in relation to general health, pain and social functioning when compared with hysterectomy.

What should secondary care be able to offer my patient?

The RCOG Standards for Gynaecology⁷ state that there should be a dedicated one-stop menstrual bleeding clinic with facilities within the clinic for diagnostic gynaecology, including hysteroscopy and ultrasound. As of 2011, approximately 30-40% of hospitals offer this service.

All secondary care providers should be able to offer second generation endometrial ablation techniques and hysterectomy. Discussion and onward referral for uterine artery embolisation, myomectomy and vaginal or laparoscopic hysterectomy should be available.^{2,5,6}

NICE also recommends that referral “should be to a specific operator with special interest or training in the area. This will ensure that any potential volume–outcome effect is maximised and clinical governance ensured”.²

FIGURE 1. INVESTIGATIONS AND TREATMENTS NOT RECOMMENDED

Investigations not routinely recommended ^{2,4}	Treatments not recommended ²
■ Direct or indirect menstrual blood loss measurements	■ Oral progestogens in the luteal phase only
■ Serum ferritin test	■ Danazol
■ Female hormone testing	■ Etamsylate
■ Thyroid testing	

TABLE 1. PHARMACEUTICAL TREATMENTS PROVEN TO REDUCE MENSTRUAL BLEEDING²

	PHARMACEUTICAL TREATMENT	HOW IT WORKS	IS IT A CONTRACEPTIVE?	WILL IT IMPACT ON FUTURE FERTILITY?	POTENTIAL UNWANTED OUTCOMES EXPERIENCED BY SOME WOMEN ⁴
First line	Levonorgestrel-releasing intrauterine system (LNG-IUS) ^{2,3}	A device which slowly releases progestogen and prevents proliferation of the endometrium A physical examination is needed before fitting	Yes	No	Common: irregular bleeding that may last for over 6 months; hormone-related problems such as breast tenderness, acne or headaches if present, are generally minor and transient Less common: amenorrhoea Rare: uterine perforation at the time of insertion
	Tranexamic acid (non-hormonal) Can be used in parallel with investigations. If no improvement, stop treatment after 3 cycles	Oral antifibrinolytic tablets	No	No	Less common: indigestion; diarrhoea; headache
Second line	Non-steroidal anti-inflammatory drugs (NSAIDs) (non-hormonal) If no improvement, stop treatment after 3 cycles. Can be used in parallel with investigations Preferred over tranexamic acid in dysmenorrhoea	Oral tablets that reduce production of prostaglandin	No	No	Common: indigestion; diarrhoea Rare: worsening of asthma in sensitive individuals; peptic ulcer with possible bleeding and peritonitis
	Combined oral contraceptives ³	Oral tablets that prevent proliferation of the endometrium	Yes	No	Common: mood change; headache; nausea; fluid retention; breast tenderness Very rare: deep vein thrombosis; stroke; heart attack
Third line	Oral progestogen (norethisterone) ³	Oral tablets that prevent proliferation of the endometrium	Yes ⁵	No	Common: weight gain; bloating; breast tenderness; headaches; acne (but usually minor and transient) Rare: depression
	Injected progestogen ^{2,3}	Intramuscular injection that prevents proliferation of the endometrium	Yes	No	Common: weight gain; irregular bleeding, amenorrhoea; premenstrual-like syndrome (including bloating, fluid retention, breast tenderness) Less common: bone density loss
Other	Gonadotrophin-releasing hormone analogue (Gn-RH analogue) If used for more than 6 months add back HRT therapy is recommended	Injection that stops production of oestrogen and progesterone	No	No	Common: menopausal-like symptoms (e.g. hot flushes, increased sweating, vaginal dryness) Less common: osteoporosis, particularly trabecular bone with longer than 6-months use

¹ The evidence for effectiveness can be found in the full guideline.

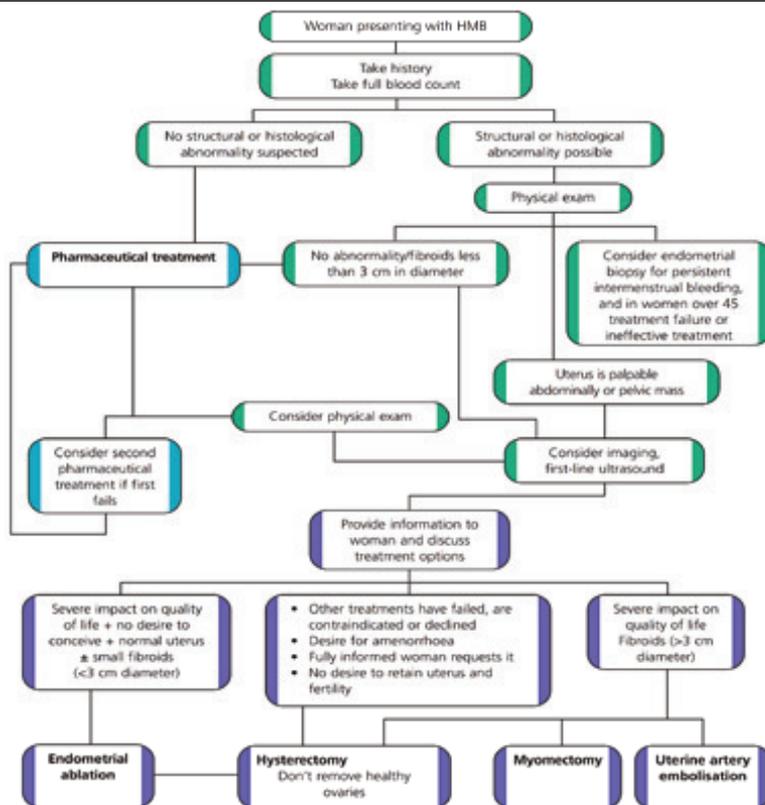
² Check the Summary of Product Characteristics for current licensed indications. Informed consent is needed when using outside the licensed indications.

³ See World Health Organization 'Pharmaceutical eligibility criteria for contraceptive use' (WHO MEC), www.ffprhc.org.uk/admin/uploads/298_UKMEC_200506.pdf

⁴ Common: 1 in 100 chance; less common: 1 in 1000 chance; rare: 1 in 10,000 chance; very rare: 1 in 100,000 chance

⁵ The recommended dosing regimen for norethisterone is not licensed for use as a contraceptive, but may affect a woman's ability to become pregnant while it is being taken

FIGURE 2. CARE PATHWAY FOR HEAVY MENSTRUAL BLEEDING



Few other conditions with this amount of morbidity would be acceptable in fit and healthy women

References

- Royal College of Obstetricians and Gynaecologists, London School of Hygiene & Tropical Medicine, Ipsos MORI. *National Heavy Menstrual Bleeding Audit: First Annual Report*. London: RCOG Press; 2011.
- National Collaborating Centre for Women's and Children's Health, National Institute for Health and Clinical Excellence (NICE). *Heavy Menstrual Bleeding*. Clinical Guideline No. 44. London: NICE; 2007.
- Wyatt K, Dimmock P, Walker J, et al. *Fertility and Sterility* 2001;76(1):125-31.
- National Institute for Health and Clinical Excellence. *Referral Guidelines for Suspected Cancer*. London: NICE; 2005.
- Royal College of Obstetricians and Gynaecologists, London School of Hygiene & Tropical Medicine, Ipsos MORI. *National Heavy Menstrual Bleeding Audit: Third Annual Report*. London: RCOG Press; 2013.
- Abnormal uterine bleeding in pre-menopausal women, SOGC Clinical Practice Guideline. *Journal of Obstetrics & Gynaecology Canada*: JOGC. 35(5):473-9, 2013 May
- Royal College of Obstetricians and Gynaecologists. *Standards for Gynaecology*. Report of a Working Party. London: RCOG; 2008.