Investigating HMB- an evidence based approach

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NICE HMB Guidance 2018
Declarations of interest

• NICE HMB 2018 Guideline committee member
  • COIs – see NICE website / publication
NICE HMB Guidance 2007 & 2018

• Original 2007 guideline needed updating
  • New evidence; new pharmaceuticals, new diagnostic and therapeutic technologies
  • Some changes needed according to differing ‘expert opinion’

• Main areas of change in 2018 revised version:
  • Diagnostic work up
  • Treatment recommendations
    • Stratified by presence or absence of ‘significant’ fibroids
    • Pharmaceutical treatment
      • Ulipristal acetate
    • Hierarchy for treatment
      • Fibroid(s) >3cm
      • Submucosal fibroids
Rationale for diagnosis: Causes of HMB

Investigating HMB- an evidence based approach
Diagnosis: Clinical Process

- Healthy and diseased population
- Diagnosis
- Diseased population
- Therapy
- Clinical outcome

Justin Clark MD (Hons) MRCOG, Birmingham Women's Hospital
Diagnosing and assessing heavy menstrual bleeding

- Woman with heavy menstrual bleeding
  - History
  - Physical examination
  - Before starting investigations
  - Laboratory tests
  - Structural and histological investigations
  - Management
## Likely causes of heavy menstrual bleeding

<table>
<thead>
<tr>
<th>Common</th>
<th>Less common</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dysfunctional Uterine Bleeding</td>
<td>Gynaecological disease</td>
<td>Gynaecological cancer</td>
</tr>
<tr>
<td>- Ovular</td>
<td>- Endometriosis</td>
<td>- Uterus</td>
</tr>
<tr>
<td>- Anovular (endometrial hyperplasia)</td>
<td>- Adenomyosis</td>
<td>- Ovary (theca and granulosa cell tumours)</td>
</tr>
<tr>
<td></td>
<td>- Diffuse myometrial hypertrophy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Pelvic inflammatory disease</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Intrauterine polyps</td>
<td></td>
</tr>
<tr>
<td>Fibroids</td>
<td>Pregnancy related</td>
<td>Endocrine</td>
</tr>
<tr>
<td>- Submucous</td>
<td>- Retained products of conception</td>
<td>- Thyroid dysfunction</td>
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<tr>
<td>- Intramural</td>
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<tr>
<td>Iatrogenic</td>
<td>Haematological</td>
<td></td>
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<tr>
<td>- Intrauterine contraceptive devices</td>
<td>- von Willebrand’s disease</td>
<td></td>
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<tr>
<td>- Exogenous sex hormones</td>
<td>- Idiopathic thrombocytopenia</td>
<td></td>
</tr>
<tr>
<td>- Anticoagulants</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*From Clark TJ and Gupta JK. Handbook of Outpatient Hysteroscopy: A complete guide to diagnosis and therapy, Hodder Arnold, London 2005*
Likely causes of heavy menstrual bleeding

- Common
  - Dysfunctional Uterine Bleeding
    - Ovular
    - Anovular (endometrial hyperplasia)
  - Fibroids
    - Submucous
    - Intramural

- Less common
  - Gynaecological disease
    - Endometriosis
    - Adenomyosis
    - Diffuse myometrial hypertrophy
    - Pelvic inflammatory disease
    - Intrauterine polyps

- Rare
  - Gynaecological cancer
    - Uterus
    - Ovary (theca and granulosa cell tumours)
  - Pregnancy related
    - Retained products of conception
  - Endocrine
    - Thyroid dysfunction
  - Iatrogenic
    - Intrauterine contraceptive devices
    - Exogenous sex hormones
    - Anticoagulants

*From Clark TJ and Gupta JK. Handbook of Outpatient Hysteroscopy: A complete guide to diagnosis and therapy, Hodder Arnold, London 2005*
**Diagnosis and HMB: Intracavity pathology**

**The FIGO classification of causes of abnormal uterine bleeding in the reproductive years**

Malcolm G. Mauro, M.D.3, Bilal O. D. Chichiley, M.D.3, and Jan S. Fraser, M.D.5 for the FIGO Menstrual Disorders Working Group

*Department of Obstetrics and Gynecology, David Geffen School of Medicine at UCLA and Keck Permanente, Los Angeles Medical Center, Los Angeles, California; 3Department of Obstetrics and Gynecology, University of Edinburgh and the Royal Infirmary, Edinburgh, United Kingdom; and 4Department of Obstetrics and Gynecology, University of Sydney Australia, and the Royal Prince Alfred Hospital, Sydney, New South Wales, Australia.*

At this juncture, clinical management, evaluation for medical providers, and the design and interpretation of clinical trials have been hampered by the absence of a consensus system for nomenclature for the description of symptoms as well as classification of causes or potential causes of abnormal uterine bleeding (AUB). To address this issue, the International Federation of Gynecology and Obstetrics (FIGO) has designed the PALM-COEIN (Polyp, Adenomyosis, Leiomyoma, Malignancy and Hyperplasia, Coagulopathy, Ovulatory Disorders, Endometrial Disorders, Iatrogenic Causess, and Not Classified) classification system for causes of AUB in the reproductive years. (Fertil Steril® 2011,55:204-6, ©2011 by American Society for Reproductive Medicine.)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Cause</th>
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<tbody>
<tr>
<td>AUB-P</td>
<td>Polyps</td>
</tr>
<tr>
<td>AUB-A</td>
<td>Adenomyosis</td>
</tr>
<tr>
<td>AUB-L</td>
<td>Leiomyoma</td>
</tr>
<tr>
<td>AUB-M</td>
<td>Malignancy/Hyperplasia</td>
</tr>
<tr>
<td>AUB-C</td>
<td>Coagulopathy</td>
</tr>
<tr>
<td>AUB-O</td>
<td>Ovulatory Dysfunction</td>
</tr>
<tr>
<td>AUB-E</td>
<td>Endometrial disorder</td>
</tr>
<tr>
<td>AUB-I</td>
<td>Iatrogenic</td>
</tr>
<tr>
<td>AUB-N</td>
<td>Non classified</td>
</tr>
</tbody>
</table>

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![Diagram](image1.png)

Musso, FIGO classification system for causes of AUB. Fertil Steril 2011.
Which tests?

Investigating HMB- an evidence based approach
Heavy menstrual bleeding: diagnosis

- History + examination
- Check full blood count

**HMB with no additional symptoms or signs**
- Pelvic mass
- Uterus palpable abdominally or pelvis mass
- Uterus is palpable abdominally or pelvic mass
- Uterus palpable abdominally or pelvic mass
- Uterus palpable abdominally or pelvic mass

**HMB with persistent intermenstrual bleeding**
- Women at high risk of endometrial pathology
- Examination inconclusive or difficult

**Suspected adenomyosis**
- Significant dysmenorrhea
- Tender bulky uterus

**Possible larger fibroids**
- Offer outpatient hysterectomy ± endometrial biopsy
- Offer pelvic ultrasound (TV or TA)
- Offer transvaginal ultrasound

**Suspected submucosal fibroids, polyps or endometrial pathology**
- Offer outpatient hysterectomy ± endometrial biopsy
- Offer pelvic ultrasound (TV or TA)
- Consider transabdominal ultrasound or MRI

**No suspected abnormality**
- Offer outpatient hysterectomy ± endometrial biopsy
- Offer pelvic ultrasound (TV or TA)
- Consider transabdominal ultrasound or MRI

**Severe impact on quality of life + no desire to conceive ± normal uterus ± small fibroids (<3 cm diameter)**
- Other treatments have failed, are contraindicated or declined
- Desire for amenorrhoea
- Fully informed woman requests it
- No desire to retain uterus and fertility

**Endometrial ablation (see table 2)**
- Don’t remove healthy ovaries

**Hysterectomy (see table 2)**
- Don’t remove healthy ovaries

**Myomectomy (see table 2)**
- Uterine artery embolisation (see table 2)

NIce clinical guideline 44
Heavy menstrual bleeding: diagnosis

1. History ± examination
2. Check full blood count

- HMB with no additional symptoms or signs
- HMB with persistent intermenstrual bleeding
- Women at high risk of endometrial pathology
- Pelvic mass
- Uterus palpable abdominally or intraabdominally
- Examination inconclusive or difficult
- Significant dysmenorrhea
- Tender bulky uterus
- HMB with no additional symptoms or signs

- Suspected submucosal fibroids, polyps, or endometrial pathology
- Possible larger fibroids
- Suspected adenomyosis

- Offer outpatient hysteroscopy ± endometrial biopsy
- Offer pelvic ultrasound (TV or TA)
- Offer transvaginal ultrasound

- Offer hysterectomy under general or regional anaesthesia ± endometrial biopsy or pelvic ultrasound

Declined

- Declined or not suitable

Consider transabdominal ultrasound or MRI

See Management pathway

HMB: heavy menstrual bleeding; MRI: magnetic resonance imaging; TA: transabdominal; TV: transvaginal

Heavy menstrual bleeding

- Woman presenting with HMB
- Take history
- Take full blood count

No structural or histological abnormality suspected
- Structural or histological abnormality possible

- Physical exam
- Pharmaceutical treatment (see table 1)

No abnormality/fibroids less than 3 cm in diameter
- Consider endometrial biopsy for persistent intermenstrual bleeding, and in women over 45 treatment failure or ineffective treatment
- Uterus palpable abdominally or pelvic mass

Consider second pharmaceutical treatment if first fails

- Consider physical exam
- Consider imaging, first-line ultrasound

- Provide information to woman and discuss treatment options

Severe impact on quality of life + no desire to conceive + normal uterus + small fibroids (≤3 cm diameter)

- Other treatments have failed, are contraindicated, or declined
- Desire for amenorrhoea
- Fully informed woman requests it
- No desire to retain uterus and fertility

Severe impact on quality of life + Fibroids (≥3 cm diameter)

Endometrial ablation (see table 2)
- Hysterectomy (see table 2)
- Myomectomy (see table 2)
- Uterine artery embolisation (see table 2)
Heavy menstrual bleeding: diagnosis

- History + examination
- Check full blood count

HMB with no additional symptoms or signs
- HMB with persistent intermenstrual bleeding
- Women at high risk of endometrial pathology

No suspected abnormality
- Suspected submucosal fibroids, polyps or endometrial pathology
- Possible larger fibroids
- Suspected adenomyosis

Offer outpatient hysterectomy ± endometrial biopsy
- Offer pelvic ultrasound (TV or TA)
- Offer transvaginal ultrasound

Declined
- Offer hysterectomy under general or regional anaesthesia ± endometrial biopsy or pelvic ultrasound
- Consider transabdominal ultrasound or MRI

See Management pathway

HMB: heavy menstrual bleeding; MRI: magnetic resonance imaging; TA: transabdominal; TV: transvaginal
Minimally invasive diagnosis: Pelvic ultrasound
Saline Infusion Sonography (SIS)
Gel SIS & 3D

Gel installation sonohysterography: first experience with a new technique

Niek Exalto, M.D., Ph.D.; Corry Slapers, C.N.P.; Louisa A.M. van Raamshouw, Pharm.D. and Mark Hans Emmanuel, M.D., Ph.D.
Department of Obstetrics and Gynecology and Department of Clinical Pharmacy, Spaarne Ziekenhuis, Hoofddorp, The Netherlands

Objective: A practical attempt to simplify and improve the technique of artificial uterine cavity distension using gel instead of flushing saline.

Design: Prospective observational study.

Setting: Teaching hospital.

Patient(s): One hundred twenty patients with an indication for sonohysterography (abnormal uterine bleeding, exclusion of congenital abnormalities, or preoperative or postoperative evaluation of submucous myomas, or synchiae).

Intervention(s): A hydroxyethylcellulose gel containing anesthetic and antiseptic agents was instilled into the uterine cavity through a plastic intrauterine insemination cannula attached to a flexible plastic tube and a transvaginal (3-dimensional) ultrasonography was performed concomitantly.

Main Outcome Measure(s): Stable filling of the uterine cavity allowing a high-quality ultrasonic visualization.

Results: An optimal distension of the uterine cavity could be achieved with an average of only 4 ml (range 2–9 ml) in 113 patients. As expected, a stable filling of the uterine cavity permitted a precise visualization of the cavity and its linings and offered an optimal presentation for a 3-dimensional ultrasound recording and reconstruction.

Conclusion(s): Gel instillation is a simple technique with minimal inconvenience for the patient and may be an attractive alternative to saline infusion during sonohysterography. (Fertil Steril 2007;87:152–5.) © American Society for Reproductive Medicine.

Key Words: Gel instillation sonohysterography, uterine cavity, 3-dimensional ultrasound.

Minimally invasive diagnosis: endometrial biopsy
Contemporary use of MIS in AUB

Minimally invasive diagnosis: HYSTEROSCOPY
Contemporary use of MIS in AUB

Diagnosis and the role of hysteroscopy
Cost-effectiveness of testing in HMB:

Cost-effectiveness of testing in HMB: Objective

• To determine the most cost-effective diagnostic testing strategy for the diagnosis and treatment of heavy menstrual bleeding
Cost-effectiveness of testing in HMB: Methods

• A clinically informed decision analytic model was constructed to reflect diagnostic work up of women presenting with HMB

• The models were created to reflect the use of:
  • TVS
  • OPH
  • EBx
  • SIS

• Tests were evaluated alone and in combination.

• Treatment without investigation was also evaluated and used as a baseline strategy for comparison.
Cost-effectiveness of testing in HMB: Overview of a decision tree within the model
Cost-effectiveness of testing in HMB: Analysis

• Expected cost, satisfaction and incremental cost-effectiveness ratios (ICER) were calculated for each strategy.

• The use of the levonorgestrel releasing intrauterine system was used as the reference-case strategy to compare all other testing strategies against

• The stability of the results was tested through deterministic and probabilistic sensitivity analysis
## Cost-effectiveness of testing in HMB: Results

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Cost (£)</th>
<th>Effectiveness (satisfaction)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNG-IUS alone</td>
<td>1067</td>
<td>0.933327</td>
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<tr>
<td>OPH alone</td>
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<td>SIS alone</td>
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<tr>
<td>TVS alone</td>
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<tr>
<td>TVS + OPH</td>
<td>1139</td>
<td>0.964382</td>
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<tr>
<td>OPH and EBx</td>
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<td>SIS + OPH</td>
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<td>0.96445</td>
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<td>SIS + EBx</td>
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<td>TVS + OPH + EBx</td>
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<tr>
<td>TVS + EBx</td>
<td>1231</td>
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<td>SIS + OPH + EBx</td>
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<td>Hysterectomy alone</td>
<td>3182</td>
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![Cost-effectiveness Graph](image)
Cost-effectiveness of testing in HMB: Results- non-dominated options

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Total Cost (£)</th>
<th>Incremental Cost (£)</th>
<th>Effectiveness (satisfaction)</th>
<th>Incremental effectiveness</th>
<th>ICER</th>
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<td>LNG-IUS alone</td>
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<tr>
<td>OPH alone</td>
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<td>OPH and EBx</td>
<td>1149</td>
<td>71</td>
<td>0.9674</td>
<td>0.0033</td>
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Cost-effectiveness of testing in HMB: Probabilistic sensitivity analysis
Cost-effectiveness of testing in HMB: Results
– Women wishing to preserve their fertility

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Cost (£)</th>
<th>Incremental cost (£)</th>
<th>Effectiveness (satisfaction)</th>
<th>Incremental effectiveness</th>
<th>ICER</th>
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<td>378</td>
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<tr>
<td>OPH alone</td>
<td>844</td>
<td>44</td>
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<td>0.0162</td>
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<td>SIS + OPH</td>
<td>94455</td>
<td>100</td>
<td>0.8649</td>
<td>0.0020</td>
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Cost-effectiveness of testing in HMB: Results – Women refractory to treatment with LNG-IUS

<table>
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<th>Strategy</th>
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<th>Incremental Cost (£)</th>
<th>Effectiveness</th>
<th>Incremental Effectiveness</th>
<th>ICER</th>
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</thead>
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<td>LNG-IUS alone</td>
<td>1355</td>
<td>0.9039</td>
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<td>299</td>
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</table>
Cost-effectiveness of testing in HMB: Conclusions

• For initial investigation of women presenting to secondary care with HMB who do not require preservation of their fertility there is a choice between outpatient hysteroscopy alone or a combination of outpatient hysteroscopy and endometrial biopsy.

• **Outpatient hysteroscopy** appears to be the most cost-effective strategy for investigating women with HMB regardless of desire for fertility or prior treatment with the LNG-IUS
NICE HMB Guidelines 2018

Investigating HMB- an evidence based approach
Diagnosing and assessing heavy menstrual bleeding

Structural and histological investigations

Hysteroscopy or ultrasound

Take into account the woman’s history and examination when deciding whether to offer hysteroscopy or ultrasound as the first-line investigation.

See why we made the recommendation on hysteroscopy or ultrasound.

Suspected submucosal fibroids, polyps or endometrial pathology

Offer outpatient hysteroscopy to women with heavy menstrual bleeding if their history suggests submucosal fibroids, polyps or endometrial pathology because:

- they have symptoms such as persistent intermenstrual bleeding or
- they have risk factors for endometrial pathology (see below).

Ensure that outpatient hysteroscopy services are organised and the procedure is performed according to best practice, including:

- advising women to take oral analgesia before the procedure
- using mini-scope as the standard diagnostic technique.
Diagnosing and assessing heavy menstrual bleeding

Suspected submucosal fibroids, polyps or endometrial pathology

Offer outpatient hysteroscopy to women with heavy menstrual bleeding if their history suggests submucosal fibroids, polyps or endometrial pathology because:

- they have symptoms such as persistent intermenstrual bleeding or
- they have risk factors for endometrial pathology (see below).

Ensure that outpatient hysteroscopy services are organised and the procedure is performed according to best practice, including:

- advising women to take oral analgesia before the procedure
- vaginoscopy as the standard diagnostic technique, using miniature hysteroscopes (3.5 mm or smaller).

Ensure that hysteroscopy services are organised to enable progression to ‘see-and-treat’ hysteroscopy in a single setting if feasible.

Explain to women with heavy menstrual bleeding who are offered outpatient hysteroscopy what the procedure involves and discuss the possible alternatives.

If a woman declines outpatient hysteroscopy, offer hysteroscopy under general or regional anaesthesia.
The Lancet

Diagnosis of heavy menstrual bleeding: a change in direction

The Lancet

BMI: https://dx.doi.org/10.1016/S0140-6736(18)31077-2

Plum Metrics

Amenorrhoea is a disturbing condition that negatively affects 30% of women, with corresponding symptoms sometimes including severe abdominal pain and persistent and irregular bleeding outside the menstrual cycle. The UK’s National Institute for Health and Care Excellence (NICE) noted that amenorrhea affects up to 1 in 20 women of reproductive age, accounting for 12% of all UK gynaecological specialist referrals.

On March 14, NICE published a substantial update to their 2007 clinical guidelines, Heavy menstrual bleeding: assessment and management. The new treatment pathway recommends investigating the symptoms and causes of amenorrhea, which in many cases will lead to a hysterectomy, previously only considered after failure of medical treatments. A hysterectomy is a final-line invasive procedure, mostly carried out in an outpatient setting, and usually performed endoscopically and anaesthetically. A general anaesthetic might be appropriate in some cases or as an emergency, and NICE advises that the risks are outweighed by the benefits of more accurate diagnosis. Although the number of annual hysterectomies in the UK will increase from 5,000 to 10,000, requiring training, new skills, and equipment, NICE expects it to be cost-effective.

This article also covers women with suspected endometrial disease, who may be asymptomatic but who have had unexpected abnormal bleeding or intrauterine and Leigh’s biopsies, for whom surgery removes the likely pathology, which is a standard diagnostic path. The guidelines also updates pharmacological recommendations, and ends a reduction in ineffective prescriptions.

This article provides a summary of the understanding of amenorrhea, with rapid and personalised diagnosis now being a priority, but has rules a need for further underlying scientific research. "There are also concerns about gynaecologists" guidelines for more complex cases. Further investment in research and standardised clinical trials is called for by NICE, which also provides evidence-based medical advice to all gynaecologists; the guidelines will contribute to a positive clinical development within this area.

www.HysteroscopyAction.org.uk • Campaign Against Painful Hysteroscopy

Home

Welcome to HYSTEROSCOPY ACTION – the website of the Campaign Against Painful Hysteroscopy

We are a group of UK patients who have had hystereoscopies and/or womb biopsies. We are concerned that a sizeable minority (5%-25%) of UK hysterecscopy patients have reported severe pain during these outpatient procedures.

We are campaigning for all hysterecscopy/uterine biopsy patients to have

• Full written information about the hysterecscopy/biopsy procedure including the risk of severe pain.
Diagnosing and assessing heavy menstrual bleeding

For women who decline hysteroscopy, consider pelvic ultrasound, explaining the limitations of this technique for detecting uterine cavity causes of heavy menstrual bleeding.

Endometrial biopsy
Consider endometrial biopsy at the time of hysteroscopy for women who are at high risk of endometrial pathology, such as:
- women with persistent intermenstrual or persistent irregular bleeding, and
- women with infrequent heavy bleeding who are obese or have polycystic ovary syndrome
- women taking tamoxifen
- women for whom treatment for heavy menstrual bleeding has been unsuccessful.

Obtain an endometrial sample only in the context of diagnostic hysteroscopy. Do not offer 'blind' endometrial biopsy to women with heavy menstrual bleeding.

See why we made the recommendations on investigations for suspected submucosal fibroids, polyps or endometrial pathology.
Diagnosing and assessing heavy menstrual bleeding

For women who decline hysteroscopy, consider pelvic ultrasound, explaining the limitations of this technique for detecting uterine cavity causes of heavy menstrual bleeding.

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Consider endometrial biopsy at the time of hysteroscopy for women who are at high risk of endometrial pathology, such as:

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See why we made the recommendations on investigations for suspected submucosal fibroids, polyps or endometrial pathology.
Blind endometrial biopsy
Hysteroscopically directed biopsy: mechanical graspers or tissue removal systems
Investigation - Women with suspected submucosal fibroids, polyps or endometrial pathology

Rationale

Outpatient hysteroscopy

• is recommended for women with HMB if uterine cavity abnormalities or endometrial pathology are suspected because: the evidence showed that it is more accurate (higher sensitivity and specificity) in identifying them than pelvic ultrasound
  • it is safe and has a low risk of complications
  • it is acceptable to women if done according to best practice guidelines
  • it is cost-effective as part of a diagnosis and treatment strategy.
    • women can have submucosal fibroids and polyps removed during the procedure, and targeted biopsy if needed

• For women who decline outpatient hysteroscopy, hysteroscopy under general or regional anaesthetic should be offered, because the benefits of accurate identification outweigh the risks of anaesthesia.

Pelvic ultrasound

• can be considered for women who decline hysteroscopy, provided that they understand and accept that it is less accurate in detecting uterine cavity abnormalities and endometrial pathology.

Endometrial biopsy

• should only be taken in the context of hysteroscopy and only from women who have a high risk of endometrial pathology, to avoid unnecessary and painful biopsies.

• 'Blind' endometrial biopsy is not recommended because it may not identify treatable lesions.
Fibroids and HMB:
Diagnosing and assessing heavy menstrual bleeding

Possible larger fibroids

Offer pelvic ultrasound to women with heavy menstrual bleeding if any of the following apply:
- their uterus is palpable abdominally
- history or examination suggests a pelvic mass
- examination is inconclusive or difficult, for example in women who are obese.

See why we made the recommendations on investigations for possible larger fibroids.

Suspected adenomyosis

Offer transvaginal ultrasound (in preference to transabdominal ultrasound or MRI) to women with heavy menstrual bleeding who have:
- significant dysmenorrhea (period pain) or
- a bulky, tender uterus on examination that suggests adenomyosis.

If a woman declines transvaginal ultrasound or it is not suitable for her, consider transabdominal ultrasound or MRI, explaining the limitations of these techniques.

Be aware that pain associated with heavy menstrual bleeding may be caused by...
Investigation - Women with possible larger fibroids

Rationale

• Hysteroscopy
  • is not able to detect abnormalities outside the uterine cavity, such as subserous or intramural fibroids, or adenomyosis. If an examination suggests a large fibroid or several fibroids,

• Pelvic ultrasound (transvaginal or transabdominal)
  • is recommended instead of hysteroscopy and is likely to be particularly cost-effective in this context.

• If abdominal or vaginal examination is difficult to perform or inconclusive (for example, because the woman is obese), pelvic ultrasound would be helpful to identify any abnormalities that might have otherwise been suggested by examination.
Research recommendations

Investigating HMB- an evidence based approach
NICE HMB Guidance 2018: Research recommendations (https://www.nice.org.uk/guidance/ng88/chapter/Recommendations-for-research)

• Of all diagnostic testing strategies, modelling has shown that the uncertainty is between first-line testing protocols based upon outpatient hysteroscopy or transvaginal ultrasound
  • Proposed RCT:
  • Hysteroscopy compared with ultrasound or empiric pharmacological treatment in the diagnosis and management of heavy menstrual bleeding (HMB)
Conclusion

Investigating HMB- an evidence based approach
Conclusion
Evidence based diagnosis in HMB

• See NICE HMB Guidance 2007 & 2018
  • Main areas of change in 2018 revised version:
    • Diagnostic work up
      • Greater role for outpatient hysteroscopy
      • Research recommendation: diagnostic work up strategies
Acknowledgments

• Natalie AM Cooper
Thank you for listening

Questions?