Treatment of Heavy Menstrual Bleeding:

Nov 14th 2013- Authors: Prof Sian Jones (Gynaecologist, Bradford Royal Infirmary, H Ludkin (Nurse Hysteroscopist, Bradford Royal Infirmary) & M Rogers (Advanced Nurse Practitioner and Senior Lecturer, University of Huddersfield). Submitted to Independent Nurse.

Heavy Menstrual Bleeding (HMB) affects women from menarche to peri-menopause. An understanding of the basics of diagnosis, examination, investigation and management are essential for all health care professionals. Nurses who have undertaken advanced training to work as Advanced Nurse Practitioners (ANP) often feel gynaecological training has been limited in their training. This article provides an update on HMB treatment options to aid competence.

HMB is defined as "*excessive menstrual blood loss which interferes with a woman's physical, social, emotional and/or material quality of life. It can occur alone or in combination with other symptoms"*. (5)

HMB is the 4th most common reason for referral to secondary care and it has a significant effect on women's quality of life (QOL). In England alone each year, 88,000 women are referred to secondary care with HMB, and of those, 28,000 women will have surgery. It represents 15% of all gynaecology referrals (12)

The priorities for all ANPs are to take a **detailed history** (6&7)**,** carry out a pelvic examination, investigate appropriately (i.e. swabs, smear, bloods and ultrasound if

indicated) and to offer evidence based management to the patient. It is a priority before any treatment is commenced to rule out any pathology that will need referral.

NICE (5) advise that the Levo-Norgestrel Intra-Uterine System (LNG-IUS) is offered first line as treatment for HMB provided a woman is happy and able to take hormones. If a woman is unhappy to use hormones or there are contraindications then an anti-fibrinolytic +/- NSAIDS can be prescribed. Global endometrial ablation can also be offered first line (Nova-Sure or Balloon Ablation) but hysterectomy should not be offered as first line treatment (5).

LNG-IUS:

The LNG-IUS is licensed for contraception, management of HMB and for endometrial protection when using HRT. It is inserted into the uterus and is similar in size and shape to an IUCD. It releases 20ug of Levonogestrel daily, this is enough to induce endometrial atrophy and therefore lessen bleeding or cause amenorrhoea. It can stay in-situ for 5 years when used for contraception and for HMB but only 4 years when used as part of HRT.

There are many randomised and comparative studies that confirm that, within one year, the LNG- IUS does reduce menstrual loss by up to 90% and increases haemoglobin and serum ferritin levels**.** The main side effects include irregular bleeding, headache, mastalgia, mood changes, nausea and oedema but these often resolve with time.

Counselling point:

The commonest reason for LNG-IUS removal is irregular bleeding. If women know what to expect in the first few months of LNG-IUS usage they are more likely to retain the device long term. Insertion should be undertaken by a trained healthcare professional and is best done during menses. At this time the internal cervical os is wider and insertion is easier. Nulliparity should not be a reason not to fit an LNG-IUS (10).

Contraindications for inserting a LNG-IUS are:

- Pregnancy,
- Undiagnosed abnormal vaginal bleeding,
- Uterine abnormality e.g. bicornuate uterus
- Pelvic infection, endometritis or cervicitis,
- Uterine of cervical malignancy,
- Bacterial endocarditis or severe liver disease.

Other medical management:

Tranexamic Acid is the drug of choice for women with HMB, taken simply during the heavy days of menses at a dose of 1gram tds up to 1.5 grams qds. It offers a reduction in menstrual loss of up to 50% (1). It is an antifibrinolytic therefore it is not suitable for women with a history of thrombo-embolic events. The main side effects include nausea, abdominal cramps, dizziness, tinnitus and rashes.

NSAIDS reduce blood flow by 25% and are particularly useful when pain is a feature. They can be used in conjunction with other medical managements. Ibuprofen has the best side-effect profile.

Combined Oral Contraceptice (COC) are useful when women with HMB also need contraception. Microgynon 30 is a popular pill to be taken and when taken 'back to back' for 3 months, often leads to amenorrhoea. Qlaira has now received its licence for HMB as well as contraception but is more expensive than other COCs.

Progesterone Only Pills (POP) such as Cerazette gives as good a contraceptive efficacy and cycle control as many of the COCs and is suitable for women who have contraindications for the COC.

Global Endometrial Ablation:

First generation ablation should not be offered as first line (Trans Cervical Resection of the Endometrium, Rollerball Ablation) because global ablation has been shown to give better results with less risk. 1st generation ablation is reserved for women with large or irregular cavities: it requires significant operator skill, and has longer operating times.

70% of endometrial ablation done in the UK in 2013 are NovaSures (radio-frequency ablation) 30% are done using thermal balloons (Thermachoice, Thermablate, Cavaterm). For patients the amenorrhea rates tend to be better with Novasure (4). If endometrial ablation is unsuccessful less women who have had Novasure (5%) end up having a hystectomy than those who had Thermachoice (15%).

Counselling point:

When counselling a woman considering a NovaSure ablation she can expect a 65% chance of amenorrhoea, 30% chance of spotting and 5% chance of failure (4). If she is considering a balloon ablation she can expect 35% amenorrhoea, 45% chance of lighter periods and 20% chance of failure. Both can be done under local anaesthesia but pain scores with NovaSure are better than with balloon ablation (11).

Evidence Base:

Despite the NICE HMB guidance being available since 2007, concerns about inequality of access and availability of treatment have been expressed as there is wide regional variation in treatments offered for HMB (3).

For this reason the Royal Coege of Gynaecologists (RCOG) set up a National Audit of management of HMB which began in 2009. Nearly 16,000 women took part. The RCOG have published 3 subsequent reports (9).

The 1st report May 2011 reported that:

- 80% of hospitals had access to ultrasound, hysteroscopy and endometrial biopsy,
- Only 38% of hospitals had a dedicated menstrual bleeding clinic
- Only 30% of hospitals had a local written protocol regarding the care and management of women with HMB.
- It highlighted the **limited implementation** of the NICE HMB guidelines.
- Women from the most deprived areas of England were more likely to have hysterectomies
- Women from the least deprived areas were more likely to have endometrial ablation

The 2nd report July 2012 reported that:

- 31.1% of women had received **no initial treatment in primary care** and this percentage increased with age
- The women more likely to have had no previous treatment were non-white ethnicity, had fewer GP visits, had HMB alone or with fibroids,
- 26.0% of women in severe or very severe pain had had no previous treatment

The 3rd report September 2013 reported on secondary care experience:

- 18% had no treatment, 57.2% had 1 treatment and 24.8 - 2 + treatments 29.3% were given oral medication (including the pill) 33.3% had an IUS, 23% had an ablation and only 13.8% had hysterectomy i.e. < 40% had surgery
- 74.3% rate their care excellent / very good, 16% Good and only 9.7 fair/poor.

The RCOG concluded that as health professionals we should be developing HMB pathways of care to improve access to evidence based investigation and management in primary and secondary care (9).

Practice Point:

Awareness of the NICE guidelines on HMB in primary care is low: A survey of 250 GPs in the UK carried out by Bayer Healthcare this year revealed that 14% of GPs are unaware of NICE Guidelines and further 56% are aware they exist but do not know the details.

NICE issued 6 quality standards for HMB (6). These quality standards cover the care of women of reproductive age with HMB as a result of cyclical ovarian activity or underlying uterine fibroids and sets out what high quality care in the NHS in England should include, so that the best care can be offered to women with HMB. Follow the link in the references to read this as it will give you more understanding on key questions in history taking, examination and investigation guidance and a summary of the management options.

To summarise the NICE quality standards with clinically important key points from the authors we remind you to ensure questions relating to menstruation in relation to cyclical ovarian activity and impact of the bleeding on quality of life and psycho-social implications are explored within the detailed history taking from the patient. Additionally do not forget to ask about history relating to clotting disorders (6).

Red flags need to be considered and investigated as they may indicate a structural or histological abnormality. These red flags include: Inter-Menstrual Bleeding, Post Coital Bleeding, Post- Menopausal bleeding, Dyspareunia, pelvic pain and pelvic pressure. If a patient presents with red flags ensure a thorough history and examination (including bi-manual examination and swabs) are undertaken and refer as appropriate for investigations/secondary care assessment.

Abdominal and Pelvic examination should always be carried out. Additional training may be needed to develop and maintain these competencies (7). Fibroids may be palpable and it is important to note that uterine fibroids greater than 3 cms will influence the woman's treatment options.

Drug management can and should be offered at the first assessment. Clinicians should not wait until all investigations are complete or referral is being arranged. It is common for a wait to occur for ultrasound investigation which will confirm a suspected or confirmed structural abnormality (such as uterine fibroids) or histological abnormality (cancer or atypical hyperplasia). These women will need specialist/secondary care services. Tranexamic acid and/or NSAIDS can be prescribed whilst awaiting definitive diagnosis or determining the most appropriate treatment option.

Endometrial ablation should always be offered prior to referring any woman for hysterectomy. It is less invasive, gives fewer complications and is usually performed as day surgery or in an outpatient setting. Hysterectomy used to be the only option available to women with HMB but now we have a plethora of treatment options suitable for most women. Decisions on treatment should be made together after giving women all the information including side effects to consider.

Last year the Yorkshire Gynaecology Development Group released a free interactive on line resource on “Abnormal Uterine Bleeding” (AUB) (8). This resource will assist clinicians not just with knowledge of HMB but also other causes of AUB. The resource includes “what is AUB” with a core knowledge section to give the underpinning knowledge to then move on to undertake clinical case studies. The case studies will help them link the theory learnt to AUB scenarios that they may observe in the health care areas. Videos, pod casts, and algorithms will also take the

viewer through the stages in AUB assessment including history taking, investigations, examination and management (http://aub.hud.ac.uk)

The group are now working on a contraception programme which should be launched early in 2014 using the same interface. It is hoped that a series of resources will follow, including menopause, sexual health, infertility, PCOS and incontinence.

Conclusion:

By clearly understanding the causes of HMB, being able to take a history, undertake pelvic examination and investigations and being aware of the management of HMB clinicians will competently manage a condition that impacts quality of life for many women. Knowing how to treat in primary care and when to refer to secondary care will ensure that women with HMB are getting the right treatment, from the right person at the right time and in the right place.

BOX 1

The causes of HMB are:

- Dysfunctional uterine bleeding (no cause found) **commonest**
- Pelvic pathology (e.g. polyps and fibroids, endometriosis and pelvic infection)
- Clotting disorders (e.g. Von Willebrands Disease)
- Medical disorders (e.g. under active thyroid)
- Cancer (endometrium rarely, and very rarely cervix and ovary)

Box 2:

Treatment options for HMB (in order):

1. LNG-IUS- The Mirena
2. Medical management (Tranexamic Acid (+/- NSAIDS or the Combined Oral Contraceptive or the Progesterone Only Contraceptive or Depo- Provera)
3. Endometrial ablation
4. Hysterectomy – last resort.

4References:

1.Bonnar J & Sheppard BL. Treatment or Menorrhagia during Menstruation: Randomised Control Trial. British Medical Journal 1996; 313 (7-57 579-582

2.Clark T and Gupta J. Handbook of Outpatient Hysteroscopy: A Complete Guide to Diagnosis and Therapy. Hodder Arnold, London 2005

3.Cromwell D, Mahmood T, Templeton A, Van der Meulen J. Surgery for Menorrhagia within English Regions: Variation in Rates of Endometrial Ablation and Hysterectomy. British Journal of Gynaecology, 2009 **116** (10) 1373-1379

4.Daniels J , Middleton L, Champaneria R, Khan K, Cooper K, Mol B & Bhattacharya S.Second Generation Endometrial Ablation Techniques for Heavy Menstrual Bleeding: Network Meta-Analysis. British Medical Journal 2012 344 Available at: http://www.bmj.com/content/344/bmj.e256

5.NICE Heavy Menstrual Bleeding- Investigation and Treatment. Clinical Guidance 44 NICE, London 2007

6.NICE Heavy Menstrual Bleeding Quality Standards, QS47. NICE, London 2013

7.Rogers M, Bhatoy E, Ludkin H, Jones S, Connolly A, Bramfitt A & Carpeter K. A Gynaecological History Taking and Examination Training CD-ROM for Primary Care. Mediplex, Leeds 2010

8.Rogers M, Ludkin H, Jones S, Connolly A, Bramfitt A & Carpeter K. Abnormal Uterine Bleeding (A Free Interactive Programme for Clinicians). University of Huddersfield 2012. Available at: http://aub.hud.ac.uk

9.Royal College of Obstetrics and Gynaecology Heavy Menstrual Bleeding Audit 2013 Available at: http://www.rcog.org.uk/files/rcog-corp/NationalHMBAudit_3rdAnnualReport_September2013.pdf

10. Royal College of Sexual and Reproductive Healthcare UK Eligible Criteria for Contraceptive Use. Accessed 2013. Available at: http://www.fsrh.org/pdfs/UKMEC2009.pdf

11.Samuel N, Malick S, Middleton L, Daniels J, Gupta J & Clark J. The COAT Trial: A Randomised Controlled Trial Comparing Outpatient Endometrial Ablation Techniques (Novasure™ vs Thermachoice™): Menstrual Bleeding and Quality of Life Outcome. Gynaecology Surgery 2008 5 (Supp 1) FC-97

12.Symonds M, Symonds I Arulkumaran S Eds. Essential Obstetrics and Gynaecology. Churchill Livingstone, London 2013

Useful links

1. Abnormal Uterine Bleeding a free interactive programme for clinicians dealing with abnormal uterine bleeding accessible at: http://aub.hud.ac.uk

2. Heavy Menstrual Bleeding pathway accessible at:
   http://pathways.nice.org.uk/pathways/heavy-menstrual-bleeding/heavy-menstrual-bleeding-overview
3. HMB (NICE Guidance) accessible at:
   http://guidance.nice.org.uk/CG44/QuickRefGuide/pdf/English
4. Royal College of Gynaecology HMB Audit accessible at:

http://www.rcog.org.uk/files/rcog-corp/NationalHMBAudit_3rdAnnualReport_September2013.pdf

5. Patient Information Sheet accessible at:

www.wearwhiteagain.co.uk

6. Faculty of Sexual and Reproductive Healthcare accessible at:

http://www.fsrh.org

Photos for article:

Primary Care Women's Health Journal

BACK TO BASICS: HEAVY MENSTRUAL BLEEDING

Definition

Heavy menstrual bleeding (HMB) is excessive menstrual blood loss that interferes with a woman's physical, social, emotional and/or material quality of life. It can occur alone or in combination with other symptoms

Causes

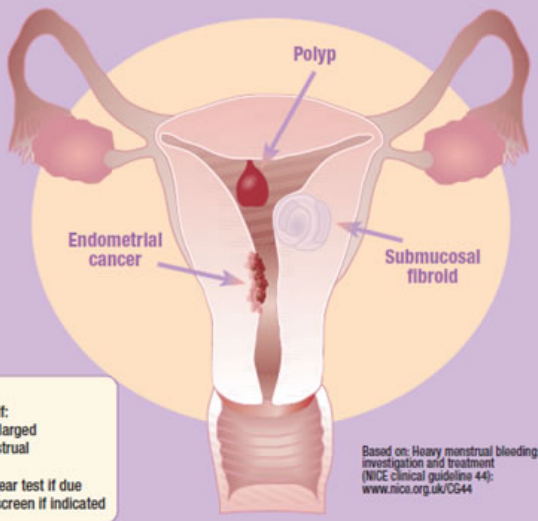
Most common
- No obvious abnormality - dysfunctional uterine bleeding

Others

Benign
- Fibroids (especially submucosal)
- Polyps
- Endometriosis
- Pelvic infection

Systemic disorders
- Hypothyroidism
- Coagulation disorders

Cancer
- Endometrium
- (Cervix)
- (Ovary)



Investigations

- Full blood count
- Von Willebrand's screen if HMB since menarche or family history
- Thyroid function tests if symptomatic
- Ultrasound if:
  - Uterus enlarged
  - Intermenstrual bleeding
- Cervical smear test if due
- Chlamydia screen if indicated

Based on: Heavy menstrual bleeding: investigation and treatment (NICE clinical guideline 44): www.nice.org.uk/CG44

Refer for hysteroscopy

Fast track:
- Post-menopausal bleeding

Routine
- Age >45
- Failed medical management, age <45
- Women with risk factors:
  - Obesity
  - PCOS
  - Insulin resistance
  - FH endometrial cancer
- Abnormal ultrasound scan findings
- Additional signs – intermenstrual bleeding

Treatment

Treat cause if found: fibroid or polyp resection/STI treatment

First line: Medical management
- Hormonal
  - Intrauterine system
  - Combined hormonal contraception
  - Long-cycle progestogen (day 5-26)
- Non-hormonal
  - Anti-fibrinolytics
  - Prostaglandin synthetase inhibitors

Second line: Endometrial ablation

Third line: Hysterectomy (laparoscopic or vaginal route if possible)

PCOS = polycystic ovary syndrome; FH = family history; STI = sexually transmitted infection; = suggests serious health problem that should not be ignored