Menorrhagia- What can a GP do when conventional treatment fails

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What is normal menstrual bleeding ?

* Normal menstruation is bleeding which follows an ovulatory event (ovulation itself or an event which mimics ovulation)
* Crescendo/decrescendo: L-H-M-L-VL
* Decrescendo in bleeding pattern: H-H-M-M-L

What is heavy menstrual bleeding ?

* Nice guidelines Jan 2007: HMB can be defined as excessive MBL which interferes with a woman's physical, social, emotional and/or material quality of life.
* Menstruation at regular intervals but with excessive flow and duration
* Clinically as blood loss > 80mls or menses lasting longer than 7 days
* **Hilgers : at least one 24-48 hour period where the woman must change tampons, towels or both more**

Heavy Menstrual Bleeding

* 1 in 20 women aged 30-49 yrs consults her GP with HMB
* Once referred to a gynaecologist , surgical intervention is highly likely
* 1 in 5 women in UK will have a hysterectomy before the age of 60
* In at least half of those who undergo hysterectomy Heavy Menstrual Bleeding is the main presenting problem

Heavy Menstrual Bleeding

* About 50% of all women who have a hysterectomy for HMB have a normal uterus removed
* Only 58% of women receive medical therapy for HMB before referral to a specialist

History taking

* History-age, parity, LMP, duration of menses, no of heavy days and frequency of tampons/towel change, cycle length. Any intermenstrual and/or perimenstrual bleeding, post coital bleeding ;Dysmenorrhoea; dyspareunia
* Encourage to chart cycle
* Cervical smear history
* Method of family planning
* Medication

Examination

General exam- Weight / height, signs of anaemia, hirsute

* Abdominal and pelvic exam- Masses, tenderness
* Speculum exam

Classification of unusual bleeding using the Creighton Model System

* **Perimenstrual bleeding**
  * Premenstrual bleeding
  * Postmenstrual brown bleeding
  * Excessively heavy menstrual bleeding

Intermenstrual bleeding

- bleeding early in mucus build up
- Bleeding closer to peak day
- Prolonged premenstrual and postmenstrual brown

Causes of perimenstrual bleeding Creighton Model System

* Premenstrual bleeding- inadequate hormone support of endometrium, premature breakdown of capillaries
* Postmenstrual brown bleeding- inadequate hormone support of endometrium by previous corpus luteum and/or irregular fragments of necrotic tissue
* Heavy Menses (changing pads every 2 hrs)- submucous fibroids; cystic hyperplasia; adenomyosis

Causes of unusual bleeding- intermenstrual bleeding Creighton Model System

* **Bleeding early in mucus build up or bleeding closer to peak day**
  * Estrogen breakthrough
  * Endometrial polyps
  * Hyperplasia / Carcinoma

  Prolonged premenstrual bleeding
  * Endometritis
  * Submucous fibroids

Causes of unusual bleeding- intermenstrual bleeding – Creighton Model System

Prolonged postmenstrual brown bleeding

* Simple hyperlasia
* Complex hyperplasia
* Adenomyosis

Anovulatory Bleeding (Dysfunctional uterine bleeding)

* Estrogen breakthrough
* Endometrial polyps
* complex hyperplasia

Results of 148 consecutive D and C's on Creighton Model Users with bleeding abnormalities

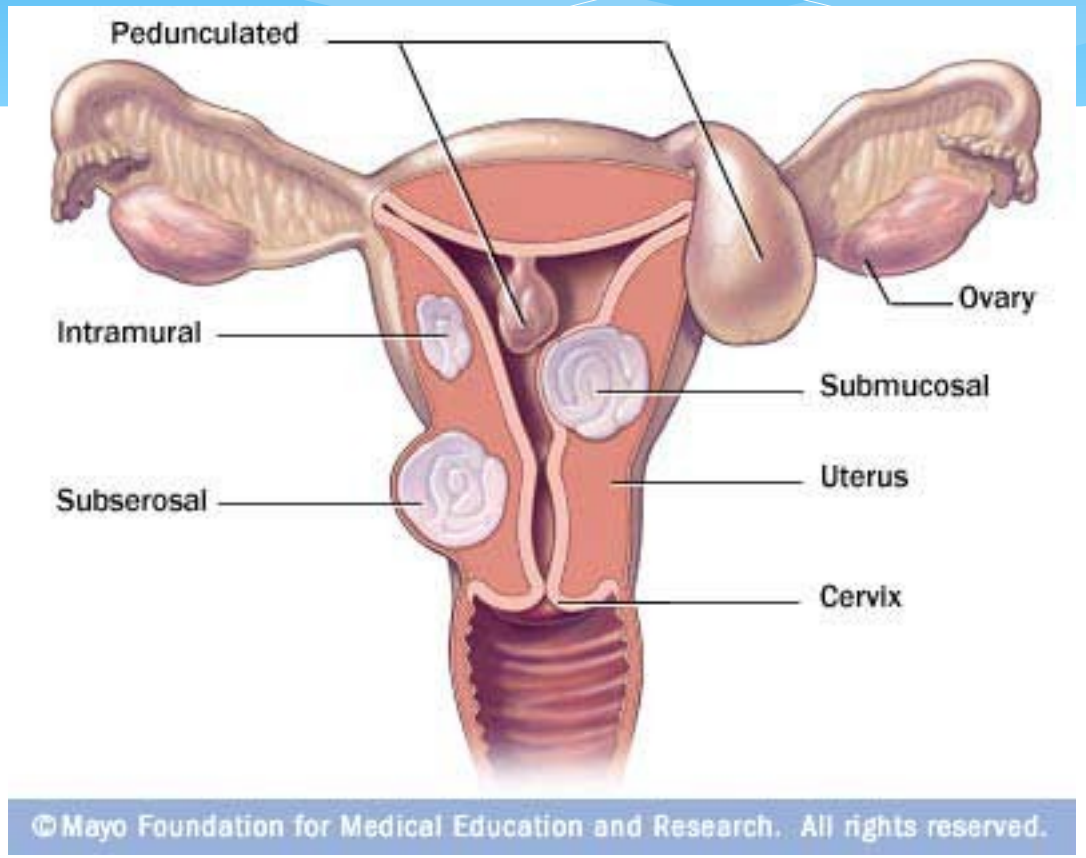
Histologic diagnosis	N	%
No organic pathology	63	42.6
Endometrial polyps	31	
Hormone imbalance	18	
Simple Hyperplasia	14	
Chronic endometritis	10	
Cystic hyperplasia	4	
Polypoid changes	4	
Atypical hyperplasia	2	
Adenocarcinoma	1	
carcinosarcoma	1	

Causes of Heavy Menses- CrMS

* Uterine fibroids
* Endometrial hyperplasia
* Adenomyosis
* Coagulation disorders : thrombocytopenia, Systemic Lupus , Von Willebrands disease

Uterine Fibroids

* 3 main types:
* Submucous
* Intramural
* Subserous



Treatment of Uterine fibroids

* Tranexamic acid/ Ponstan
* Myomectomy-
* If submucous-consider hysteroscopic resection
* Uterine artery embolisation
* Hysterectomy- laparoscopic/Robotic/Laparotomy

Endometrial hyperplasia- Creighton Model System

* Can present as perimenstrual in particular - heavy bleeding OR
* Intermenstrual bleeding in particular:
  * Bleeding early in mucus build up or bleeding closer to peak day
  * Prolonged postmenstrual brown bleeding
  * Anovulatory bleeding

Endometrial Hyperplasia

* Excessive cellular proliferation

* Pathology- 4 features are evaluated
  * Stromal invasion
  * Mitotic activity
  * Nuclear atypia
  * stratification

Endometrial hyperplasia- various degrees

* A - Focal hyperplasia
* B – Simple or cystic hyperplasia
* C – Complex hyperplasia
* D – Atypical hyperplasia

* Atypical complex hyperplasia is most likely to progress to carcinoma
* Suspected endometrial hyperplasia must be

Management in Primary Care

* Encourage woman to chart cycle
* Take good history and examination and appropriate bloods
* If abnormal bleeding on chart, pelvic mass , severe anaemia, abnormal cervix refer
* If regular heavy menses- Tranexamic Acid 1g qds during heavy days and Mefenamic acid 500mg tds esp if dysmenorrhoea

Investigations

* **Creighton fertility care charting**
* Full blood count (platelet count, MCV)
* Iron studies-Fe, TIBC, B12, Folate
* Thyroid Function tests
* Coagulation Factors – Von Willebrands Disease
* Abdominal / Pelvic ultrasound
* Hysteroscopy/ D and C
* MRI Scan with contrast

Management in secondary care

* May have already tried 3 month course of treatment with limited or no benefit
* If not charting encourage to chart
* If anaemic or unable to tolerate oral Fe consider Parenteral Fe
* History, pelvic exam, ultrasound
* Assess fertility chart and look for clues to direct investigation and treatment
* If endometrium abnormal/ thickened-endometrial

Management in secondary care

* If histology- normal/ simple hyperplasia usually due to estrogen dominance therefore add luteal phase progesterone 10 days per month and rescan in 3 months to assess endometrial thickness+/- repeat biopsy
* If histology- atypical hyperplasia-risk of developing endometrial ca . Discuss with oncology colleagues. Options are hysterectomy or progesterones and continued follow up.
* Endometrial Ca- Abdo pelvic CT scan-Hysterectomy +/-

Management in secondary care

* Hysteroscopy- endometrial polyp, cervical polyp, submucous fibroids
* Short truncated cycles benefit from luteal phase cyclogest
* Long anovulatory cycles – luteal phase cyclogest +/- clomid
* Progesterone insufficiency i.e. premenstrual /postmenstrual bleeding – augment with luteal phase cyclogest . If abnormal bleeding persists probe further for diagnosis e.g. adenomyosis/ hyperplasia

Case no 1

* 46 year old nulliparous woman
* Referred by GP with pelvic mass
* Feeling tired, unable to finish 3 mile run
* Heavy, regular periods for years- very heavy x 48 hours- at least 10 pads/ 24 hrs
* No sig past medical history
* On examination:
* Pale, pulse 62 bpm

Investigations

* Hb 7.2g/dl, MVC 59.6, ferritin 2.7, TSH 17
* IgA tissue transglutaminase antibodies – normal
* MRI – innumerable intramural fibroids. Largest intramural fibroid 8.5x 7 cm. Also submucosal fibroids. IV contrast confirms vascular fibroids and good candidate for embolisation

Management

* Admitted for intravenous Iron Infusion
* Commenced Tranexamic acid and Ponstan-heavy bleeding persisted
* Options discussed- wishes to conserve uterus. Oral medication ineffective and significant fibroids
* Uterine artery embolisation or myomectomy.

Management

* Straightforward uterine artery embolisation
* Hb 11.5 g/dl
* Commenced Eltroxin 50 mcg
* Awaiting repeat MRI in 6 months

Case 2

* 46 yo woman, para 2 – 15yrs, 10yrs by LUSC
* 5 month history of almost continuous bleeding-heavy at times Anaemia ? Hb
* Gp prescribed – tranexamic acid, norethisterone, Fe sachets
* Barrier method for family planning
* Normal cervical smear 2 years ago
* Mild hypertension controlled with betablocker

Case 2
Examination

* Overweight
* No abdominal masses
* Pelvic scan- Bulky anteverted uterus, thick endometrium 2.12cm. Normal left ovary, unable to see right ovary
* Unsuccessful attempt at endometrial biopsy

Investigations

* Hb 7.6g/dL MCV- 84.7 (82-98) Iron deficiency anaemia
* Nov 2009 Hysteroscopy, D and C
* Thick spongy looking endometrium
* Histology-Complex pattern with midcycle secretory glands and inactive endometrium and **hyperplastic endocervical polyp removed**

Treatment

* Fe- Galfer BD
* Tranexamic acid 1g qds
* Luteal phase Cyclogest400mg per rectum from day 20 cycle x 10 nights for possible estrogen dominance as over weight

Follow up

* Reviewed 6 months later-
* Did not comply with Cyclogest
* Then very heavy bleed – GP
* GP had commenced Provera 10mg tds x 1 week and then Ovranette cocp for 3 weeks-developed irregular heavy bleeding

Follow up

* On examination- tissue coming through os- **decidual cast**- confirmed on pathology
* Pregnancy test- negative
* Vaginal ultrasound- poor views
* Advised to continue with Cyclogest, tranexamic acid
* Requested Hysterectomy

Management

* Sure she wished definitive treatment- hysterectomy
* Hb pre-op 11.1g/dl
* Open hysterectomy and bilateral salpingo-oopherectomy-
* Pathology- no malignancy but extensive endometrial autolysis.
* Commenced Estrogen only HRT
* Reviewed Feb 2011 Hb 13.2g/dl Happy

Case 3

* 53 yr old woman, Para 6
* Prolonged heavy bleed x 23 days. Prior to this k=7/28.
* Feeling tired- anaemiac Hb 8.8g/dL
* Laparoscopic sterilisation > 20 y ago

Clinical Examination

* Overweight
* No abdominal mass
* Vaginal US- Normal size uterus, Irregular endometrial stripe 1.65 cm
* Endometrial pipelle biopsy
* Provisional Diagnosis- Anovulatory bleeding /hyperplasia/ carcinoma
* Treatment- Tranexamic acid/ Fe till biopsy result

Investigations

* Pipelle Biopsy- Endometrioid adenocarcinoma with solid and papillary areas, grade 2 with squamous metaplasia
* CT scan of abdomen and pelvis: Slightly thickened endometrium. Myometrium not deformed. Normal ovaries. No lymphadenopathy

Treatment

* TAH and BSO- Well to moderately differentiated stage 1B endometrioid adenocarcinoma. No lymphovascular invasion. Normal ovaries

* 16 months later- doing well, no recurrence.

Case 4

* 45 year old lady, para 6- youngest 10yrs
* 8 month history of heavy regular bleeding, passing large clots and flooding. Mild dysmenorrhoea
* Sterilisation 10 years ago
* Hb 11.4. low ferritin =6
* Ultrasound: small intramural uterine fibroid- 1.6cm, thickened endometrium- 3cm
* GP commenced Tranexamic acid and Ponstan

Examination

* Normal weight
* No abdominal mass
* Vaginal Ultrasound – bulky retroverted uterus, thick endometrium 3 .1cm, normal ovaries
* Endometrial pipelle biopsy taken

Results

* Pathology- simple hyperplasia
* Hb 11.8 g/dL, MCV 84

Treatment

* Cyclical Cyclogest 400mg from peak +3 of cycle x 10 nights
* Tranexamic acid 1g qds

3 month Follow up

* By 3rd month periods much lighter no longer requiring Tranexamic acid
* Pelvic scan- endometrial thickness 1.29cm
* Nausea- Reduced cyclogest 200mg

* Reassured
* Continue for 12 months

1 year follow up

* Stopped Cyclogest 6 months ago
* Periods getting heavier but not as heavy as before
* Missed 1 cycle
* Hot flushes
* Pelvic scan- endometrial thickness 0.47 cm- regular proliferative lining.
* Perimenopausal: Reassured – Happy to continuue with luteal cyclogest .

Summary

* The complaint of heavy menstrual bleeding is very common
* More accurate diagnosis can be made if charting cycle.
* Refer if:
  * Intermenstrual bleeding
  * No response to tranexamic acid/Ponstan ,
  * pelvic mass,
  * severe anaemia

Summary

* At consultant clinic- aim to make a diagnosis from charting, ultrasound, endometrial biopsy and hysteroscopy and tailor treatment to this.
* Treatment aims to restore cycles back to normal
* Women are more likely to comply with treatment if they have a diagnosis and understand the rationale behind the treatment and can see their cycles on the chart return to normal

Aims and Objectives

* Definition
* Why is it important
* Causes
* Case Scenarios

Menstrual Scoring System

* H - Heavy 12 points
* M - Moderate 8 points
* L – Light 4 points
* VL – Very Light 2 points
* B – Brown 1 point
* Assign appropriate score to each day of the first six days of menstruation. To obtain menstrual score, divide the sum of these scores (for the first six days) by six. The mean menstrual score in normal menses

Referral to a Gynaecologist

* Nice Guideline advises :
* Women 45 years or older
* Persistent intermenstrual bleeding
* Treatment failure/ ineffective

Management in secondary care 2nd line

* Levonorgesterol IUCD (Mirena IUCD)-
* Second generation endometrial ablation
* Hysterectomy

Causes of Abnormal bleeding

* Anovulatory cycles
* Dysfunctional uterine bleeding
* Fibroids
* Infection- cervicitis, endometritis.
* Endometrial polyp
* Endometrial hyperplasia- simple/atypical
* Endometrial Ca/ Cervical ca/Ovarian Ca/ Trophoblastic

Causes of Abnormal bleeding

* Endocrine : PCOS ;hyper/hypothyroidism; Prolactinoma; Congenital Adrenal hyperplasia/ adrenal tumours
* Bleeding disorders : Von Willebrands Disease, ITP, Usually in adolescent age group Suspect if heavy bleeding since menarche; family history of bleeding disorders; personal history of 1 or more of the following-
  * Notable bruising without known injury
  * Bleeding of oral cavity or GI tract without obvious lesion

Causes of Abnormal bleeding

* Liver Disease: Alcoholism/ Hepatitis
* Renal Disease