AUB discussion

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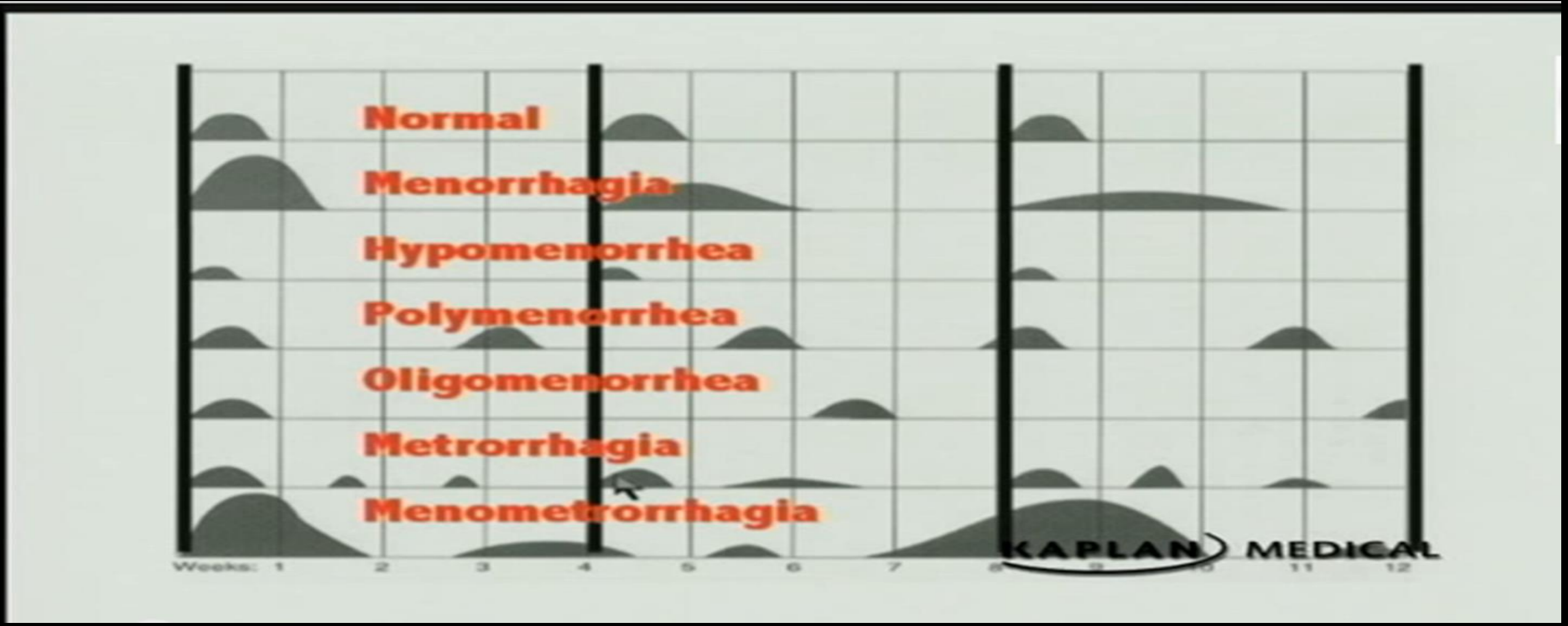
Normal Menstrual Cycle

Parameter	Normal Limits (5th to 95th centile)
Frequency of menses (cycle length)	24–38 days Cycle length is the number of days from the first day of bleeding in one menstrual cycle to the first day of bleeding in the next
Regularity	≤7–9 days No more than between 7–9 days' difference between the shortest to longest cycles
Duration (days of bleeding in a single menstrual period)	≤8 days
Volume (monthly blood loss)	Clinical definition is subjective and defined as a volume of menstrual blood loss that does not interfere with a woman's physical, social, emotional, and/or quality of life Normal volume is between 5–80 ml.

Abnormal uterine bleeding

Parameters	Terminology	Out with 5th to 95th centile
Frequency of menses (cycle length)	Absent	Amenorrhoea – primary or secondary
	Infrequent	>38 days
	Frequent	<24 days
Regularity	Irregular	Variation 10 days
Duration (days of bleeding in a single menstrual period)	Prolonged	> 8 days
Volume (monthly blood loss)	Heavy or light	Subjectively defined
Intermenstrual bleeding(IMB)	AUB occurs between well-defined cyclical menses	
Postcoital bleeding (PCB)	Non-menstrual genital tract bleeding immediately (or shortly after) intercourse	

FIGO Committee for Menstrual Disorders recommends the following terms should no longer be used



Prevalence of AUB

- Common
- often chronic and debilitating
- 14–25% of women of reproductive age

Causes of AUB

Polyp
Adenomyosis
Leiomyoma
Malignancy & hyperplasia

→ **Submucosal**
→ **Other**

Coagulopathy
Ovulatory dysfunction
Endometrial
Iatrogenic
Not yet classified

Assessment
How would you approach the patient?

- History
- P/E
- Investigations
- Management

Symptoms

- **Heavy menstrual loss**
- Detailed history of the menstrual cycles/bleeding
- IMB, PCB
- Tiredness, weakness, or easy fatigability
- **Associated symptoms**
- Dysmenorrhea primary vs secondary
- Dyspareunia endometriosis or PID
- Pressure symptoms
- Offensive vaginal discharge may be present in pelvic infections.
- The influence patients lifestyle

Other relevant history

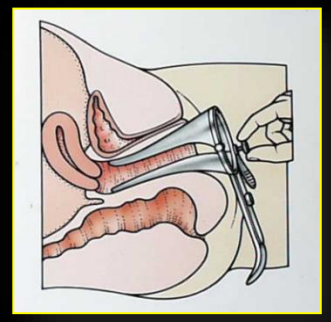
- Detailed past gynaecological history contraception(&fertility plan), pap smear ..
- Obstetric history/ breast feeding
- Past medical history
- pre-existing bleeding tendencies/FH
- Anticoagulant medications/ Tamoxifen
- Weight gain, constipation, and hair loss suggest thyroid disorder.
- Past surgical history may influence the treatment.
- Risk of STI
- Family history of gynaecological history

Signs

- **General examination**
- BMI
- look for tachycardia, hypotension, and pallor
- signs of hypothyroidism
- bruises or gum bleeding
- **Abdominal examination**
- look for any scars, tenderness or masses
- • Tenderness - endometriosis or pelvic infection
- • Large fibroids, endometriotic cysts, and tumours could present as abdominal masses.

Pelvic examination

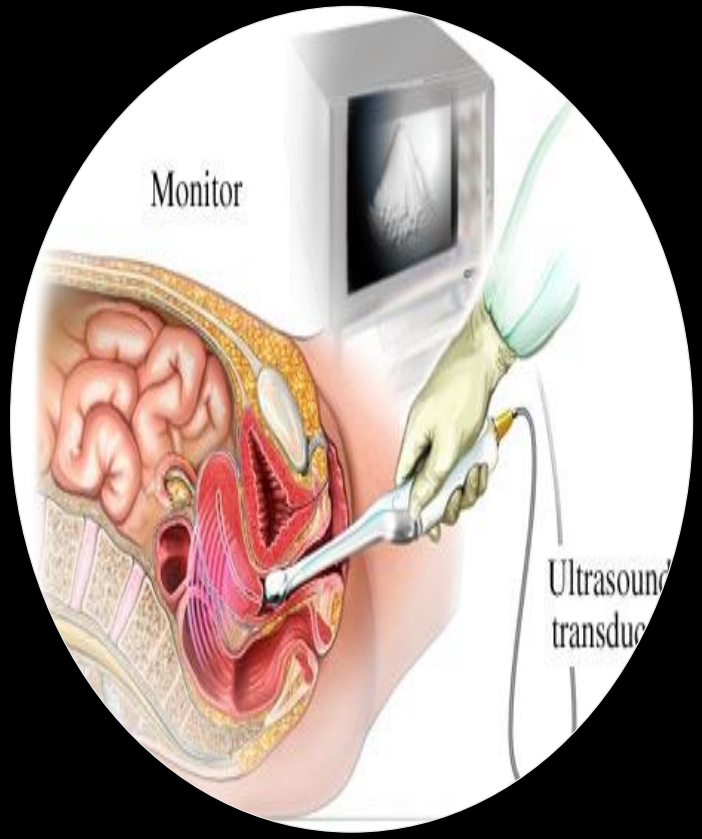
- **Speculum**
- look for any local cervical or vaginal lesions
- Assess the severity of the blood loss
- **Bimanual examination**



- uterine size, shape, tenderness & mobility
- Enlarged uterus -fibroids / adenomyosis
- Restricted mobility - endometriosis and pelvic infections
- Tenderness – adenomyosis/ endometriosis/ PID

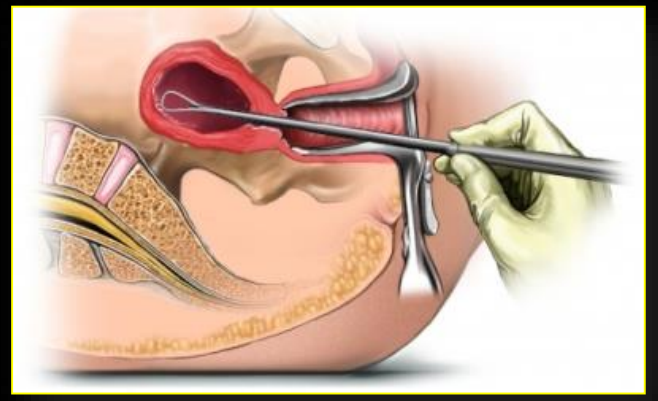
Investigations

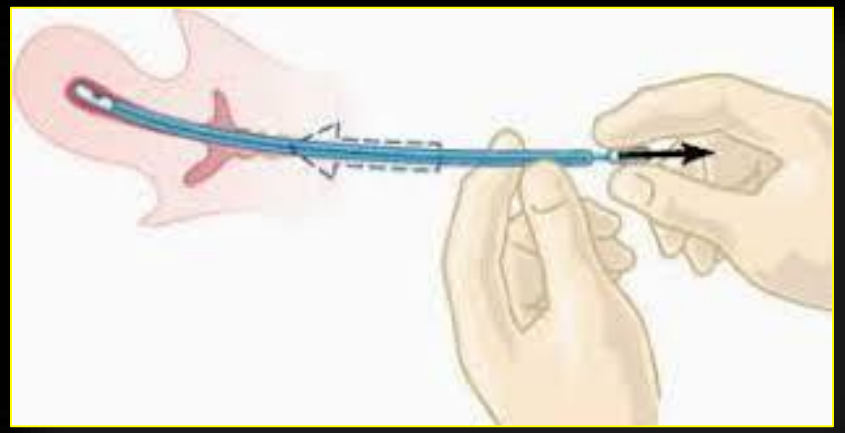
- **TVS USS**— good to identify fibroids , polyps, and measuring endometrial thickness.

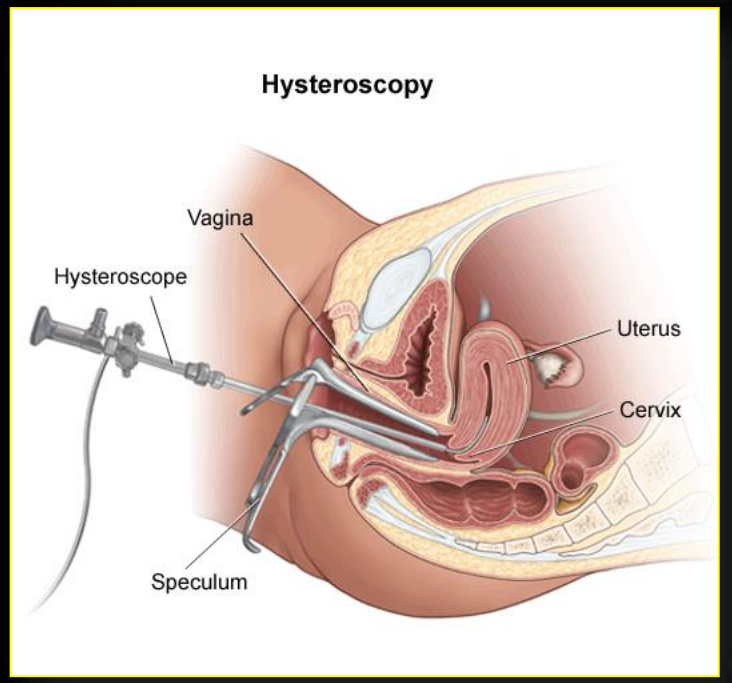


Endometrial sampling

- D&C
- Hysteroscopy
- Pipelle



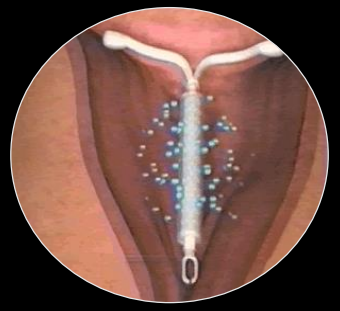




Treatment-Medical

- ***Hormonal***

❖ Mirena IUS



- levonorgestrel ⟶ atrophic endometrium
- Blood loss ↓ by up to 90% and ~ 30% will be amenorrhoeic at 12mths.
- Provides contraception

- IUS has resulted in a major ↓ in number of hysterectomies.

❖ Progesterone

from day 5 to 26 in a cyclical manner.

from day 15 or 19 to day 26 of the cycle

- Cyclical progesterone for 21 days of the cycle results in a significant reduction in menstrual blood loss.

❖ Combined oral contraceptive

•*Non-hormonal*

- ***Antifibrinolytics:*** tranexamic acid 1g tds days 1–4 (50%↓ in loss)

- ***NSAIDS:*** mefenamic acid 500mg tds days 1–5 (30-40 ↓ in loss and significant ↓ in dysmenorrhoea)

Surgical treatment

Endometrial Ablation

Hystrectomy

- A 46-year-old woman has a 3-year history of worsening heavy menstrual bleeding (HMB) with regular cycles and dysmenorrhoea.

Adenomyosis

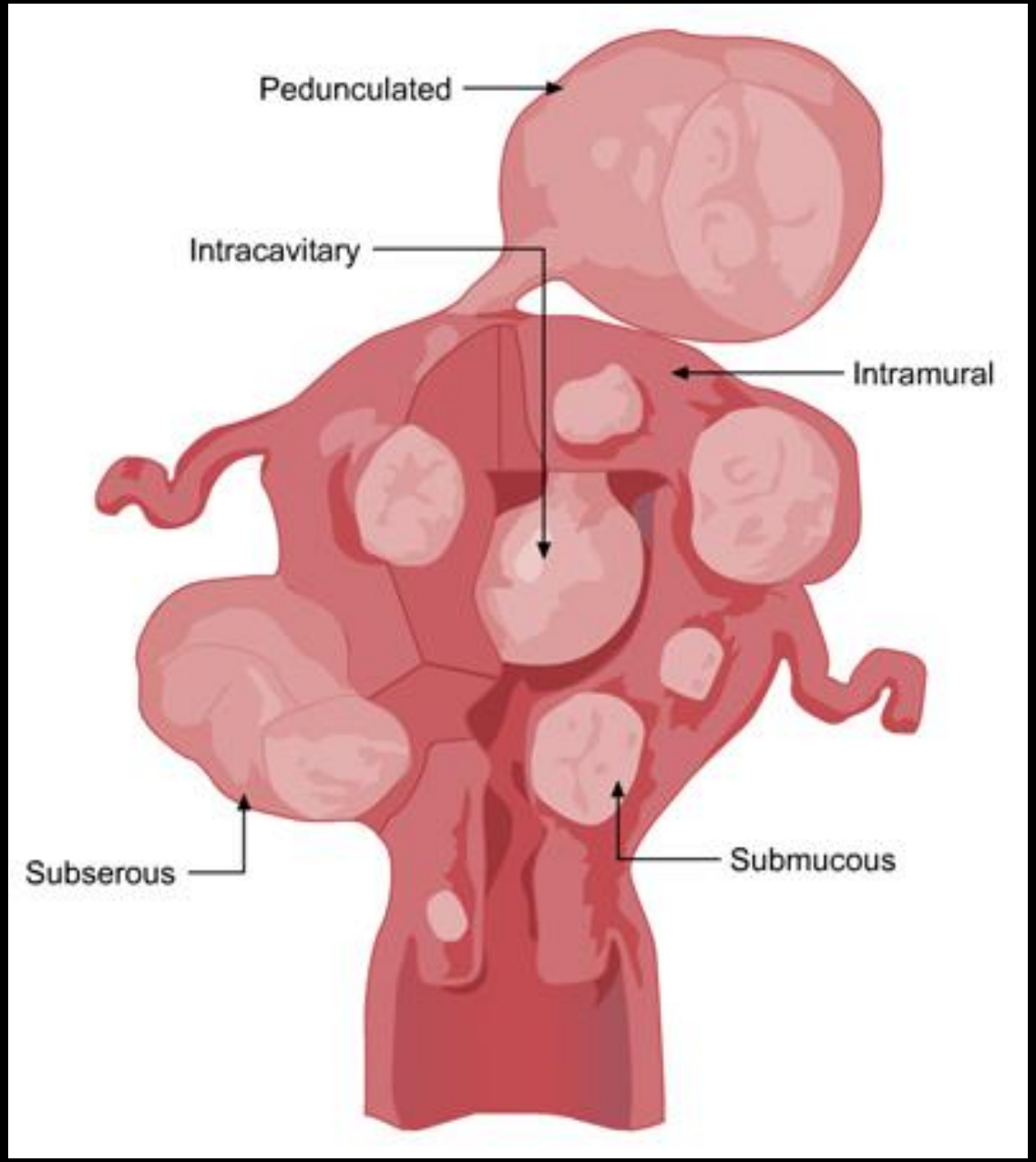
- Adenomyosis is a benign, common gynaecological condition causing **heavy, painful periods** in premenopausal women who tend to be **multiparous** and between 40 and 50 years of age. Overall it is considered to contribute to approximately 10% of all cases of HMB and 30% of all cases of HMB with dysmenorrhoea.

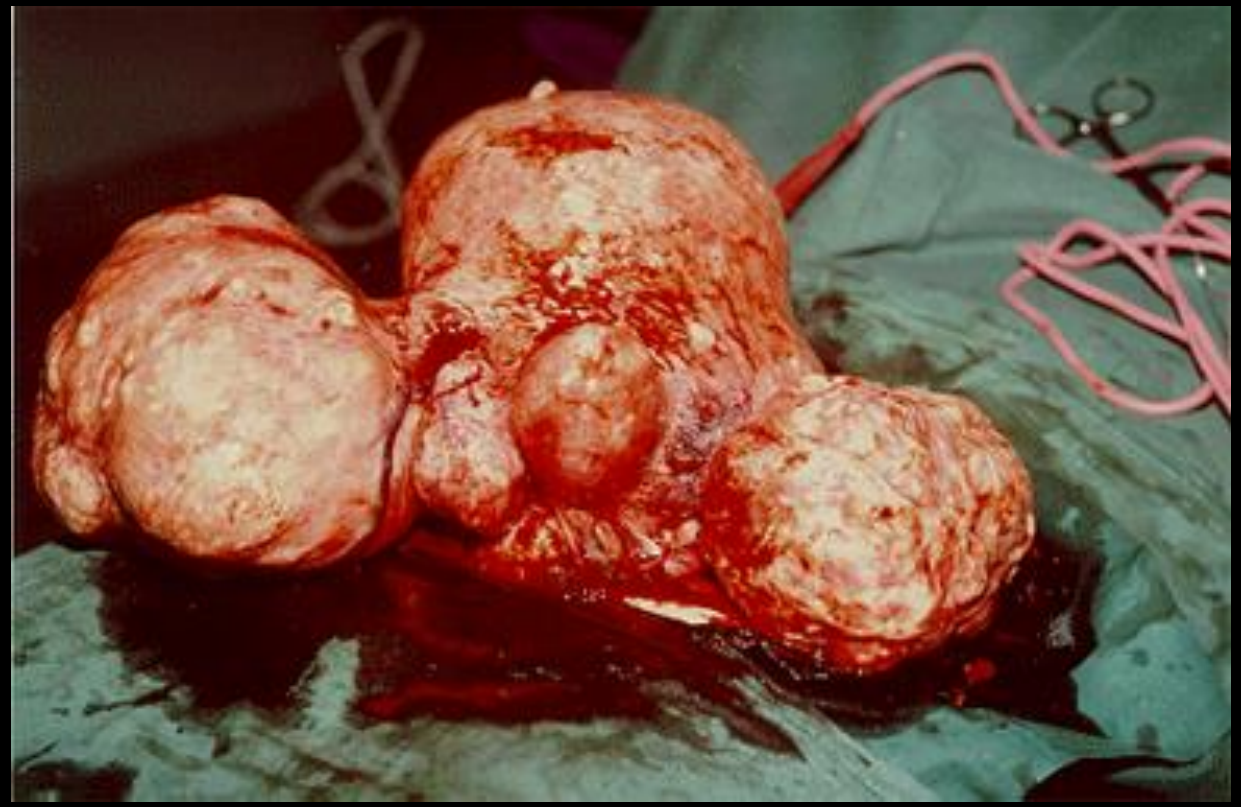
- It is defined **histologically** (usually on a hysterectomy specimen) as the presence of non-neoplastic endometrial glands and stroma in the myometrium. It is often associated with hypertrophy and hyperplasia of the myometrium surrounding the ectopic endometrial tissue.

- On USS it is represented by an **enlarged globular regular uterus** with no fibroids, **myometrial cystic areas and decreased myometrial echogenicity**.
- MRI diagnostic rates are higher than USS.
- There are no serum markers available.
- Management options include:
- **medical** – mefanamic, tranexamic acid, COC, high dose continuous progesterones, GnRHa agonists and the Mirena LNG-IUS
- **uterus conserving** – balloon ablation and uterine artery embolisation
- **Hysterectomy**

Leiomyoma (fibroids)

- Uterine fibroids are smooth muscle tumours of the uterus
- Age-related and are a commonly occurring pathology.
- More common in African-Caribbean women than any other ethnicity
- Variable size from millimetres to tens of centimetres
- Asymptomatic, heavy periods, pressure symptoms and occasionally pain.
- Responsive to the female hormones (estrogen and progesterone), generally shrinking to a degree at menopause.
- Site, size and number of fibroids are linked to the level of MBL.


Pedunculated
Intracavitary
Intramural
Subserous
Submucous



Presentation

- **Asymptomatic**-incidental diagnosis
- **Symptomatic:**

- Gynaecological - AUB, HMB, pelvic pain, dyspareunia, pelvic/abdominal mass
- Anaemia due to HMB
- Obstetric - infertility, miscarriage, abdominal pain (red degeneration of fibroids), preterm labour, malpresentation, caesarean delivery, postpartum haemorrhage
- Compression of organ systems – Urinary and bowel symptoms.

Complications

- **Hyaline degeneration** is relatively common and presents as painful enlarged fibroids due to hyaline/cystic degeneration pathological process.
- **Red degeneration** (necrobiosis) occurs typically during pregnancy due to infarction at mid-pregnancy.
- **Calcification** (‘womb stone’) - usually in postmenopausal women.
- Sarcomatous (malignant) change. Generally presents as a 0.2% risk. There is a greater risk in women with multiple or rapidly growing fibroids, at advanced age, and if there is a histology is leiomyosarcoma
- **Infection** (abscess) - relatively rare.
- **Torsion** of pedunculated fibroids.

Investigations

- The ideal first-line investigation is pelvic ultrasound (transvaginal and transabdominal)
- MRI is useful when planning surgery or as a baseline prior to uterine artery embolisation (UAE).

Treatment options depend on the fertility plan

- **Seeking contraception:**
- 1st step – COC, oral/injected/IUS progestogens, short course of GnRHa
- 2nd step – hysteroscopic myomectomy +/- ablation +/- Mirena IUS.

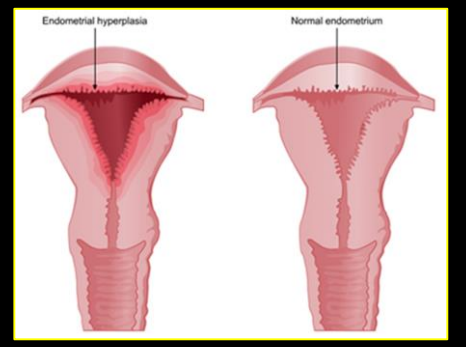
  UAE, MR focused ultrasonography, laparoscopic uterine artery occlusion and bipolar radiofrequency ablation
- 3rd step – hysterectomy +/- bilateral salpingo-ophrectomy.
- **Wishing to conceive:**
- 1st step – tranexamic acid/NSAIDs
- 2nd step – hysteroscopic myomectomy, laparoscopic myomectomy. Additional minimally invasive uterus-conserving treatments as above
- 3rd step – abdominal myomectomy.

- A 42-year-old woman presents with a 2 year history of AUB. She is nulliparous with a history of PCOS.

- Ms Green, a **43-year**-old **nulliparous** woman, presented with recent onset **irregular menstrual** bleeding. The bleeding was **heavy and erratic** with a variable cycle length of 24-48 days, with a duration between 4 and 12 days. Prior to this, her cycle had been regular.

- Her periods were largely **pain free**. She is sexually active and no associated dyspareunia or postcoital bleeding. Her last smear had been normal. She used condoms for contraception. Ms Green herself felt well with no associated mood changes or hot sweats. She was a non-smoker.

Endometrial hyperplasia



- Defined as a proliferation of glands of irregular size and shape with an increase in the glands/stroma ratio.
- **simple hyperplasia** is a proliferative lesion with minimal glandular complexity and crowding with abundant stroma between glands
- **complex hyperplasia** represents a proliferative lesion with severe glandular complexity and crowding as well as minimal stroma between glands.
- **Cytologic atypia** refers to enlarged epithelial cells that are hyperchromatic with prominent nucleoli and an increased nuclear-to-cytoplasmic ratio. Cytologic atypia is the most important prognostic factor for progression to carcinoma.

Type of endometrial hyperplasia	Risk of malignancy if untreated	Risk of spontaneous regression if untreated
Simple non-atypical	1–3% progression rate	90% spontaneous regression rate
Complex non-atypical	1–5% progression rate	80–90% spontaneous regression rate
Simple atypical	10–25% progression rate	70% regression rate
Complex atypical	30–50% progression rate	60% regression rate

- **< 2% of hyperplasias without atypia** progress to carcinoma and the mean duration of progression to carcinoma takes almost 10 years.
- **Atypical hyperplasia** progresses to carcinoma in **23%** of cases over a mean duration of 4 years.
- Importantly, **endometrial cancer may co-exist in 30–50% of atypical** endometrial hyperplasias.
- Treatment options depend on patient age, the presence of cytologic atypia, fertility plan, and surgical risk.

A **66-year**-old **nulliparous** woman who underwent **menopause** at 55 years complains of a 2-week history of vaginal bleeding. Prior to menopause, she had irregular menses. She denies the use of estrogen replacement therapy.

PMH is significant for **diabetes** mellitus controlled with an OHD

O/E BMI 35

BP is 150/90 mm Hg

The heart and lung examinations are normal. The abdomen is obese, and no masses are palpated. The external genitalia appear normal, and the uterus seems to be of normal size without adnexal masses.

- What do you call this bleeding?
- What is your main concern?
- What are the risk factors for this patient?
- Which investigations will you arrange for?

- **Mr. and Mrs Green presented to your clinic because they were trying for a baby for the last year.**
- **Mrs Green is a 23 years and gives a history of infrequent periods since her menarche at the age of 16. She has mild acne. Her BMI is 28.**

Mrs. Black is a 45-year old lady who presented to the gynaecology clinic complaining of AUB (abnormal uterine bleeding).

- What investigations will you request for this lady?
- What are the methods to obtain endometrial sampling?
- Which procedure will you recommend and why?

A woman presents with her 15-year-old daughter who has recently started complaining of period pain.

- Age of menarche
- Analysis of pain including timing and duration, type and severity, and any factors that alleviate or exacerbate the pain
- Associated gynaecological and non-gynaecological symptoms
- Menstrual history
- Medical history to identify possible conditions with similar symptoms to dysmenorrhoea (e.g. irritable bowel syndrome and lactose intolerance)
- Medication history, including effectiveness of any previous treatments
- Family History/ social-stress

- A 25-year-old women P0, presents with a history of dysmenorrhoea since menarche, which initially improved with the COCP. She now has pain throughout the month with cyclical exacerbations. For the last three years she has also had severe dyspareunia.

- A 25-year-old woman has been trying to conceive for 2 years. She has painful periods and dyspareunia. On examination, the uterus was retroverted with reduced mobility and there were palpable nodules in the rectovaginal septum.

Mrs Farooq is a 35-year old lady who presented to the clinic today complaining of heavy cycles for 6 months.

- What relevant information would you like to know?