Abnormal Uterine Bleeding

Menorrhagia: Heavy Menstrual Bleeding HMB , is excessive menstrual blood loss (over several consecutive cycles) that has a major effect on the woman's quality of life

Metrorrhagia:

Polymenorrhea:

Menometrorrhagia:

Aetiology

- Idiopathic: no organic pathology can be found,

Bleeding of Endometrial Origin BEO

(dysfunctional uterine bleeding DUB).

the principal factors implicated in the pathogenesis :

- disordered production of prostaglandins (PGE2 & PGF2α)
- enhanced fibrinolytic activity
- abnormalities of endometrial vascular development.

- DUB :
  - Anovulatory: occur in women at the extremes of the reproductive life & is typified by irregular cycles.
  - Ovulatory: more common in women aged 35 to 45 years & is typified by regular heavy & often painful menstrual periods.

Secondary abnormal vaginal bleeding: due to organic pathology:

- Local causes
- • Fibroids
- • Endometrial polyps
- • Pelvic inflammatory disease (PID)
- • Intrauterine contraceptive devices (IUCDs)
- • Endometrial/cervical carcinoma.

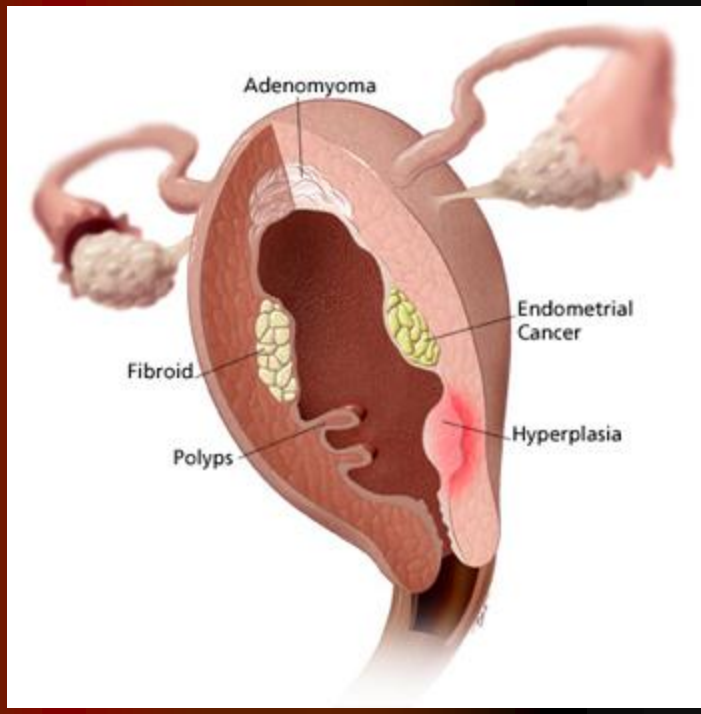


Figure 1

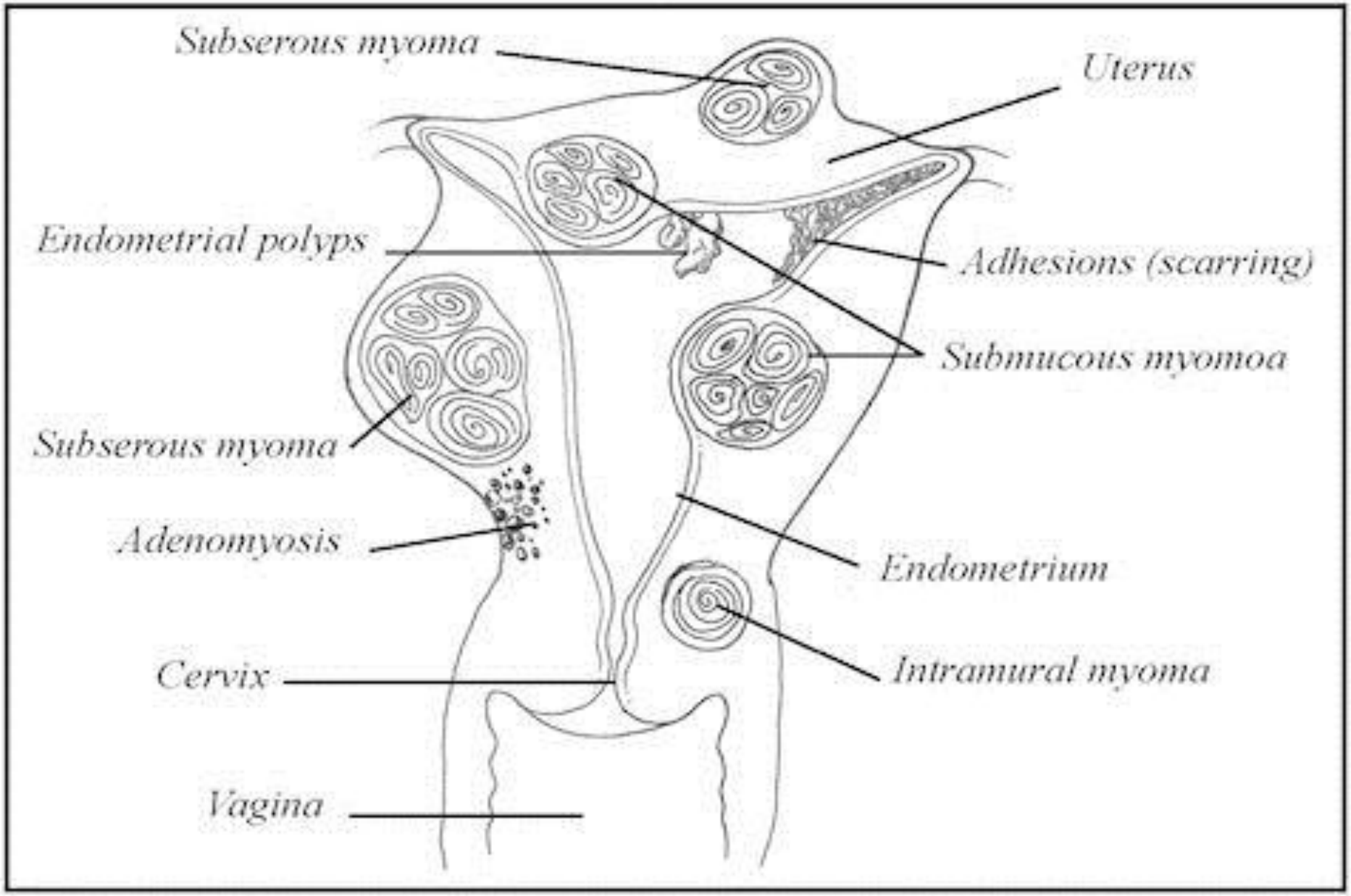


Figure 1. Causes of abnormal uterine bleeding.

- Systemic causes
  - Endocrine disorders (thyroid disease)
  - Disorders of haemostasis (VonWillibrand disease)
  - Liver & renal diseases
  - Medications like warfarin
  - Disorders of pregnancy

Management :

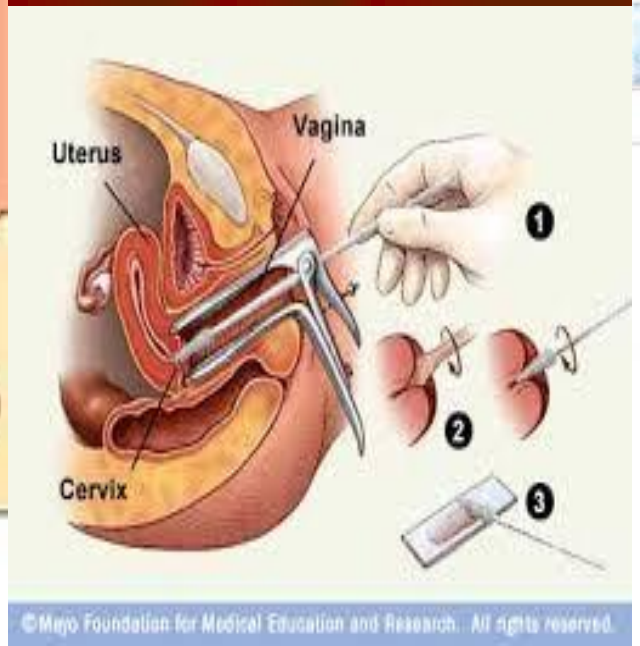
Diagnosis:

- History:
- pattern of abnormal bleeding, estimation of its severity
- Other cyclical symptoms such as dysmenorrhea.
- intermenstrual or postcoital bleeding.
- gynecological history.
- Detailed reproductive history.

Examination:

- vital signs
- general examination for stigmata of systemic illness
- Palpation of the abdomen for liver enlargement & any pelvic masses.

- Pelvic exam. Speculum examination of the vagina & cervix ,endocervical swab & cervical smear should be taken if indicated.
- Bimanual examination to assess for uterine or adnexial enlargement or tenderness.



Laboratory Investigation :

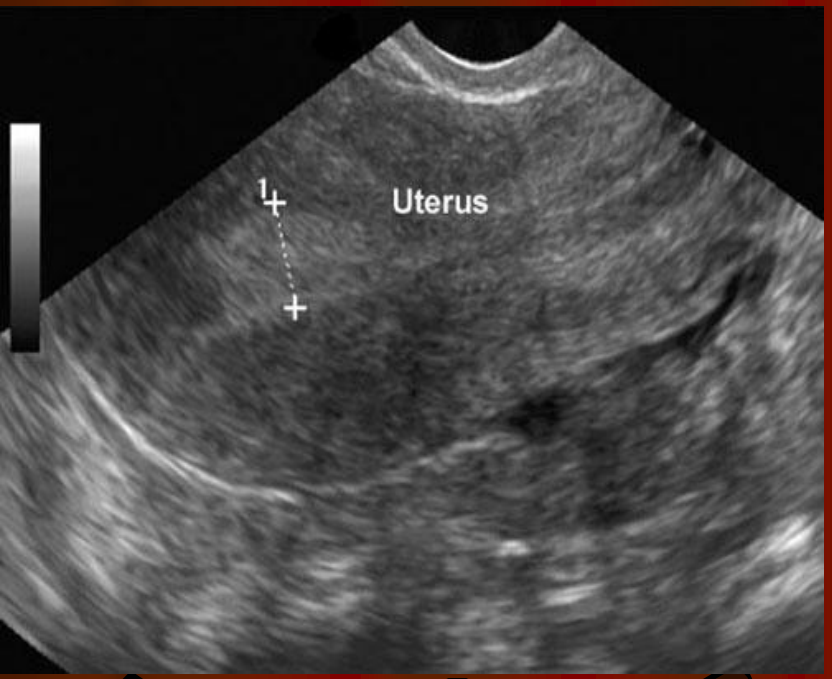
- Full blood count.
- Serum βhCG: if any possibility of pregnancy.

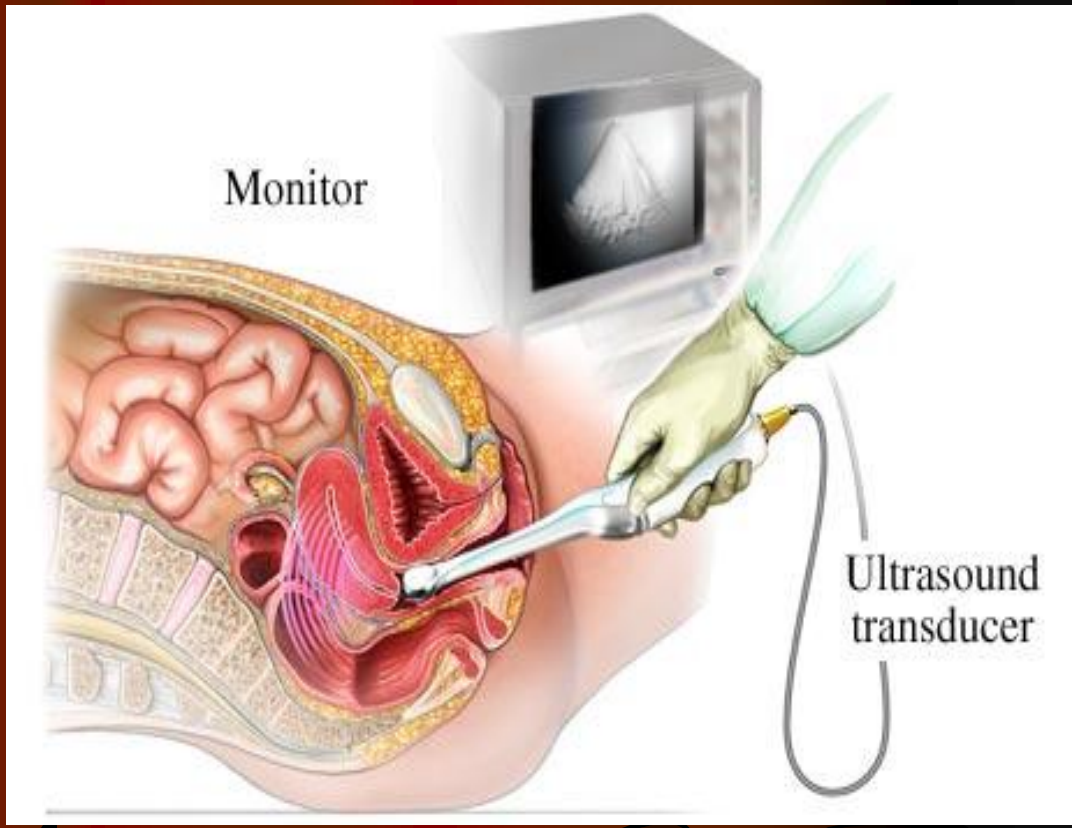
If indicated:

Pap smear & high vaginal swab & cervical swab

- Thyroid function test.
- Coagulation screen / bleeding time.
- Renal / liver function test.

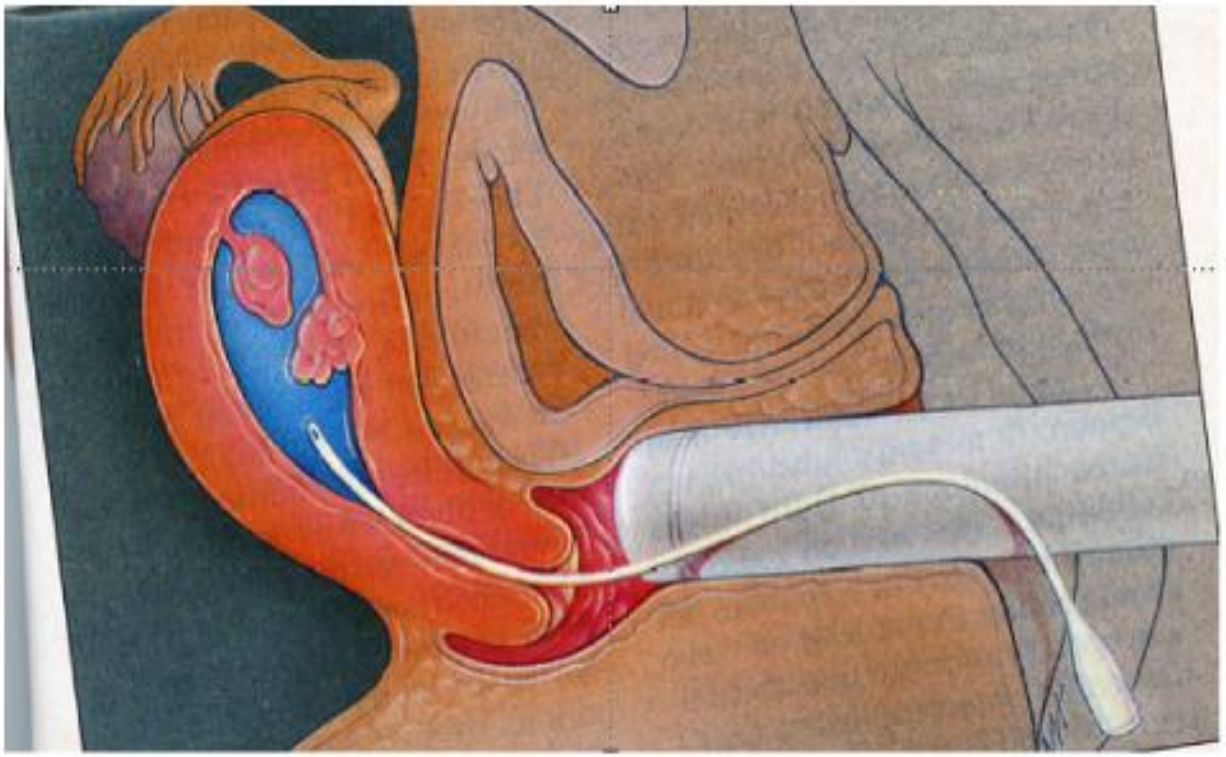
- **Imaging Technique:**
- Transvaginal ultrasound is the first-line diagnostic tool for identifying structural abnormalities ,indicated when the uterine size by examination is more than 10 weeks





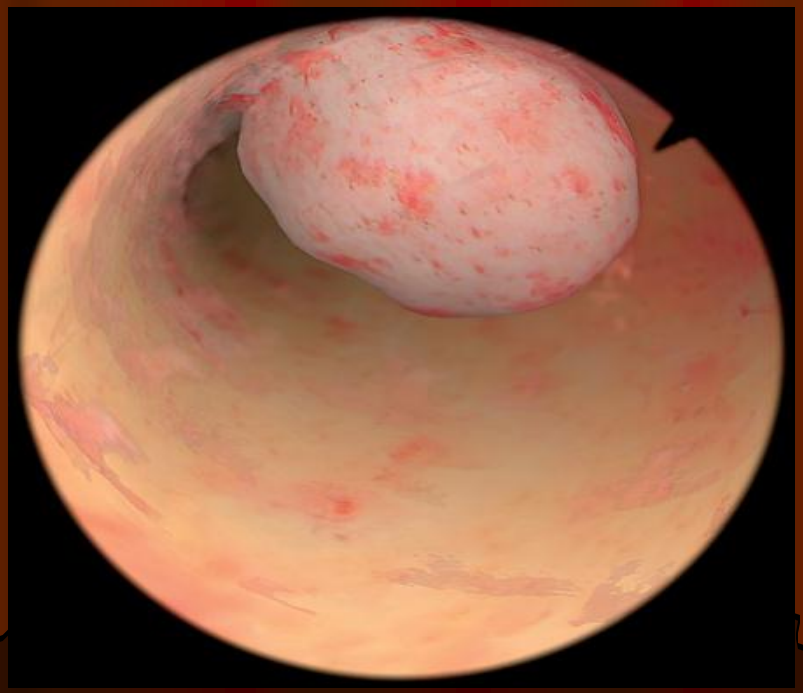
- Saline sonohysterography: ultrasound-based technique of saline infusion is useful to delineate the uterine cavity when hysteroscopy is not available.
- Saline infusion sonography should not be used as a first-line diagnostic tool.

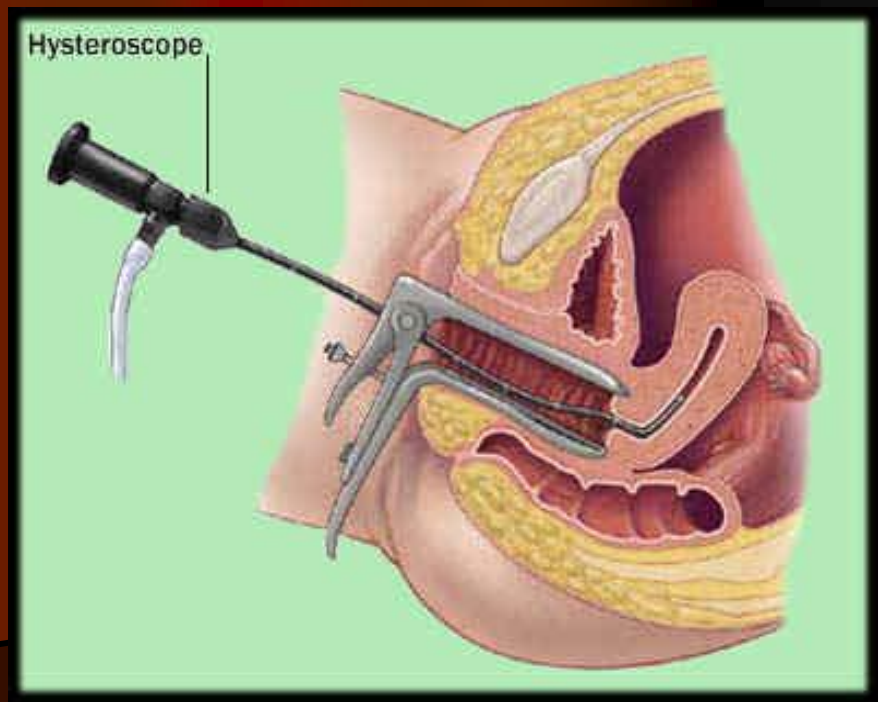
Saline-Infused Ultrasound



Hysteroscopy: the gold standard for endometrial evaluation when used in combination with biopsy.

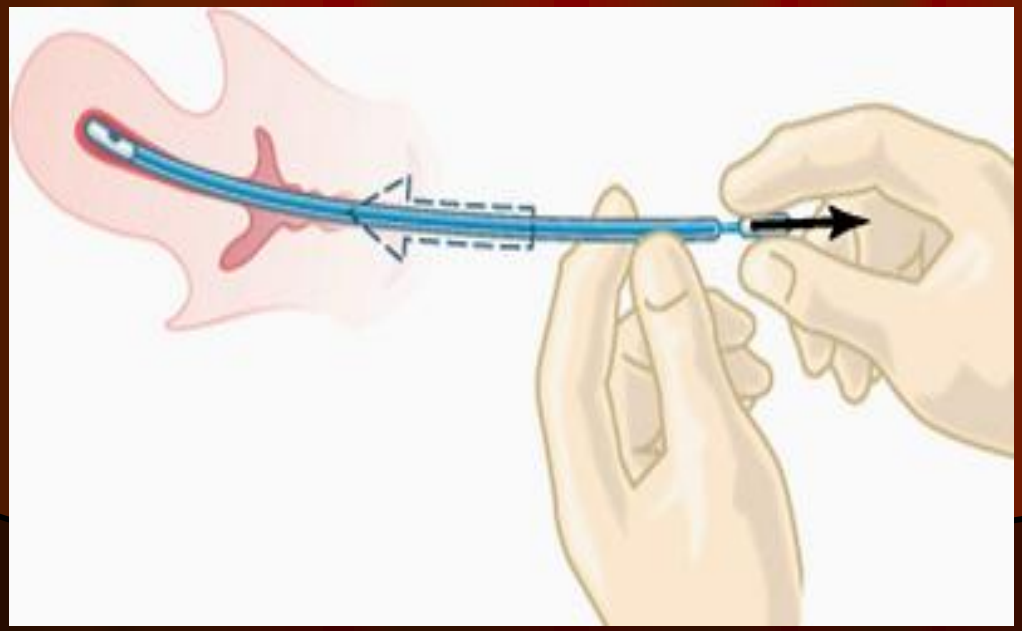
should be used only when ultrasound results are inconclusive.. ideally performed during the proliferative phase of the cycle when the endometrium is at its thinnest.

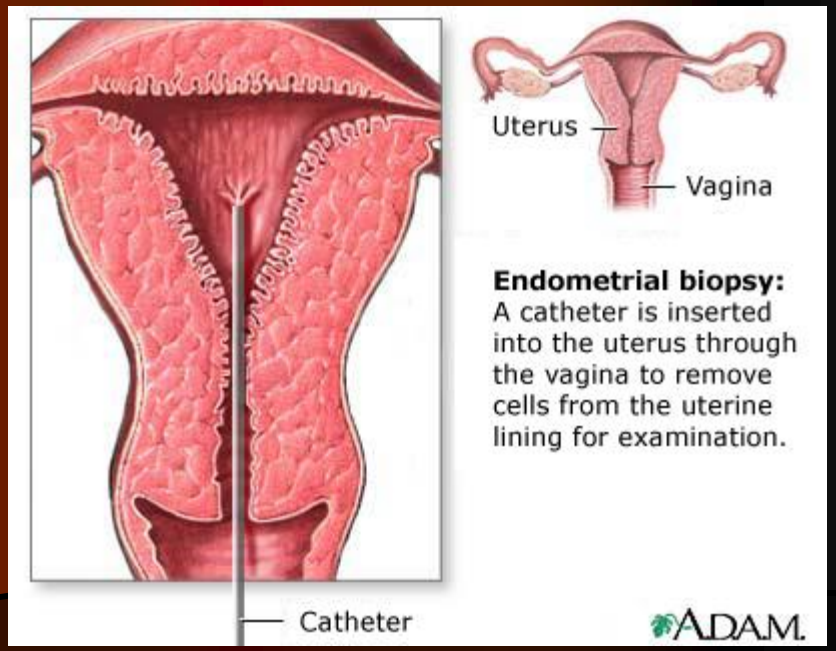




Endometrial sampling: **to exclude endometrial cancer or atypical hyperplasia.**

- Aspiration technique: out-patient procedures providing rapid screening test. sample obtained may not be representative of the whole endometrial cavity.
- Dilatation & curettage
- Hysteroscopically directed endometrial biopsy





Treatment:

acute bleeding: the main priorities of treatment involve:

- Resuscitation.
- Correction of anaemia.
- Arresting ongoing bleeding.

If an underlying cause is found, treatment should be directed towards the cause. If the bleeding is dysfunctional, the treatment depends on the patient's age, reproductive wishes & severity of symptoms.

Medical treatment:

- Non-hormonal therapy:
  - **Non-steroidal anti-inflammatory drugs NSAID:** antiprostaglandins act by inhibiting cyclo-oxygenase enzyme thereby reducing local prostaglandin levels. Reduce the menstrual loss by 30% , reduce dysmenorrhea. Example is mefinamic acid.
  - **Antifibrinolytics:** e.g, tranexamic acid.

. Reduce menstrual blood by 50%, used during menstruation only & is contraindicated in patients with history of thromboembolism.

- Hormonal treatment:
- Levonorgestrel-Intrauterine system: In addition to its contraceptive benefit, it cause a mean reduction in menstrual blood loss of about 95% by 1 year after insertion. it cause irregular menses for the first 3-6 months after insertion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- Combined oral contraceptive pills: for women require contraception. It reduce menstrual blood loss, control irregularities, & relieve menstrual pain.
- Synthetic progestogens: e.g, norethisteron, used from day 5 of the cycle for 21 days. are more useful for anovulatory DUB.

Second line drugs:

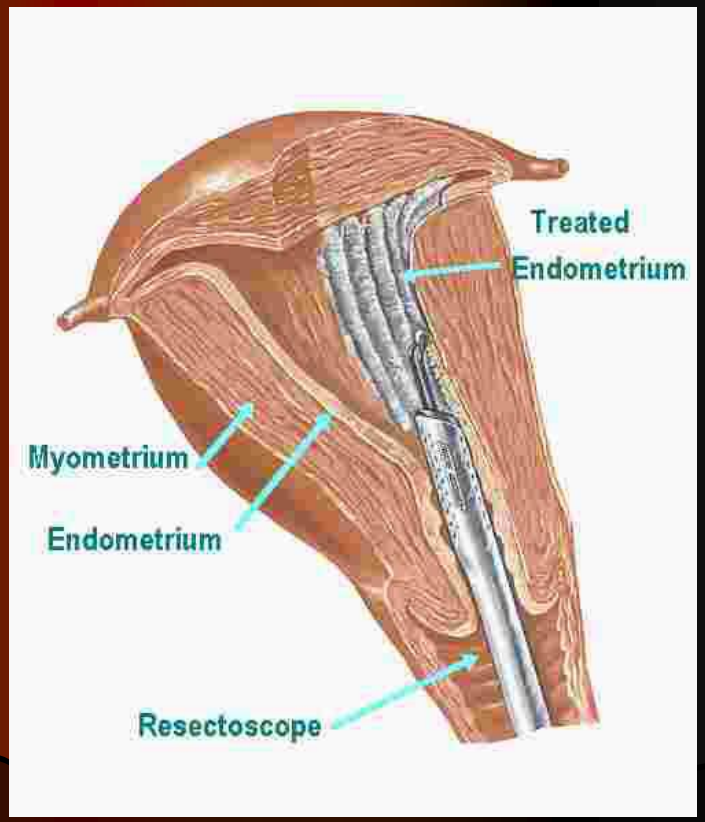
- Danazol: derivative of testosterone, competitive inhibitor of sex steroids, Its androgenic side effects limit use.

- Gonadotrphin releasing hormone (GnRH) analogues: induce medical menopause (mechanism), should not be used (without add back therapy) for longer than 6 months because of the risk of osteoporosis.

- Gestrinone: is a synthetic derivative of 19-nortestosterone with antiestrogenic, antigestagenic & androgenic activity.

Surgical Treatment: reserved for those in whom medical treatment has failed & has completed their family size.

- endometrial ablation: destruction of the endometrial lining including the basal layer prevents regeneration of the endometrium by inducing changes similar to those seen in Asherman syndrome

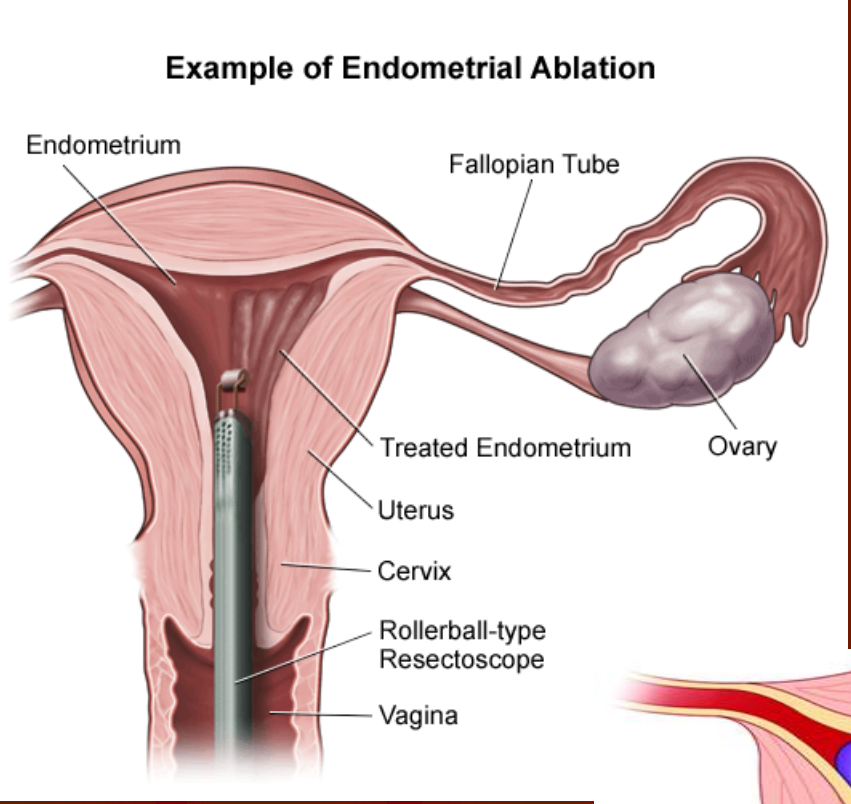


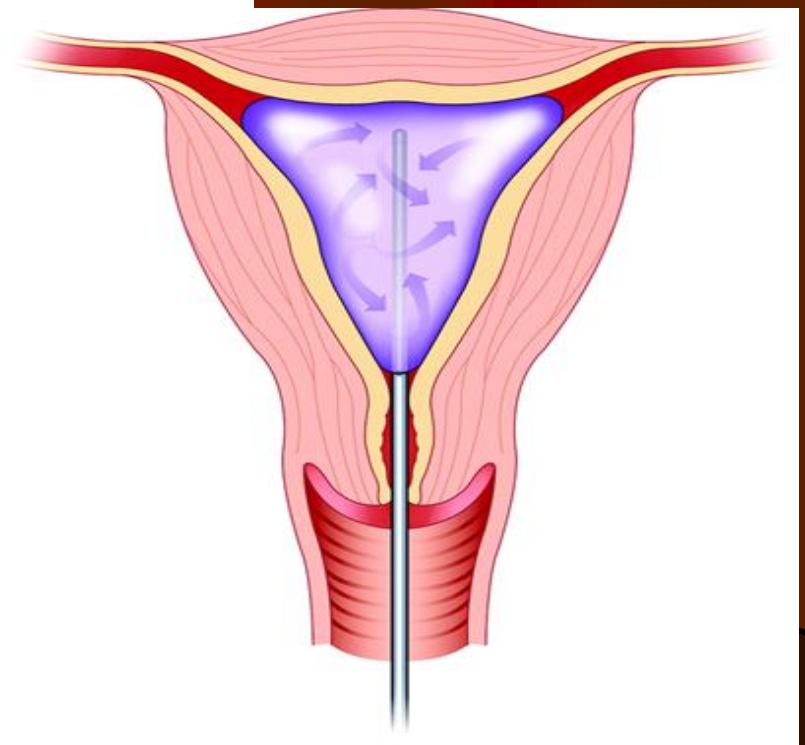
Methods performed under direct visualization at hysteroscopy:

- Laser
- Diathermy
- Transcervical endometrial resection

Methods performed non-hysteroscopically:

- Thermal balloon uterine therapy
- Microwave ablation
- Heated saline


Example of Endometrial Ablation
Endometrium
Fallopian Tube
Treated Endometrium
Ovary
Uterus
Cervix
Rollerball-type
Resectoscope
Vagina

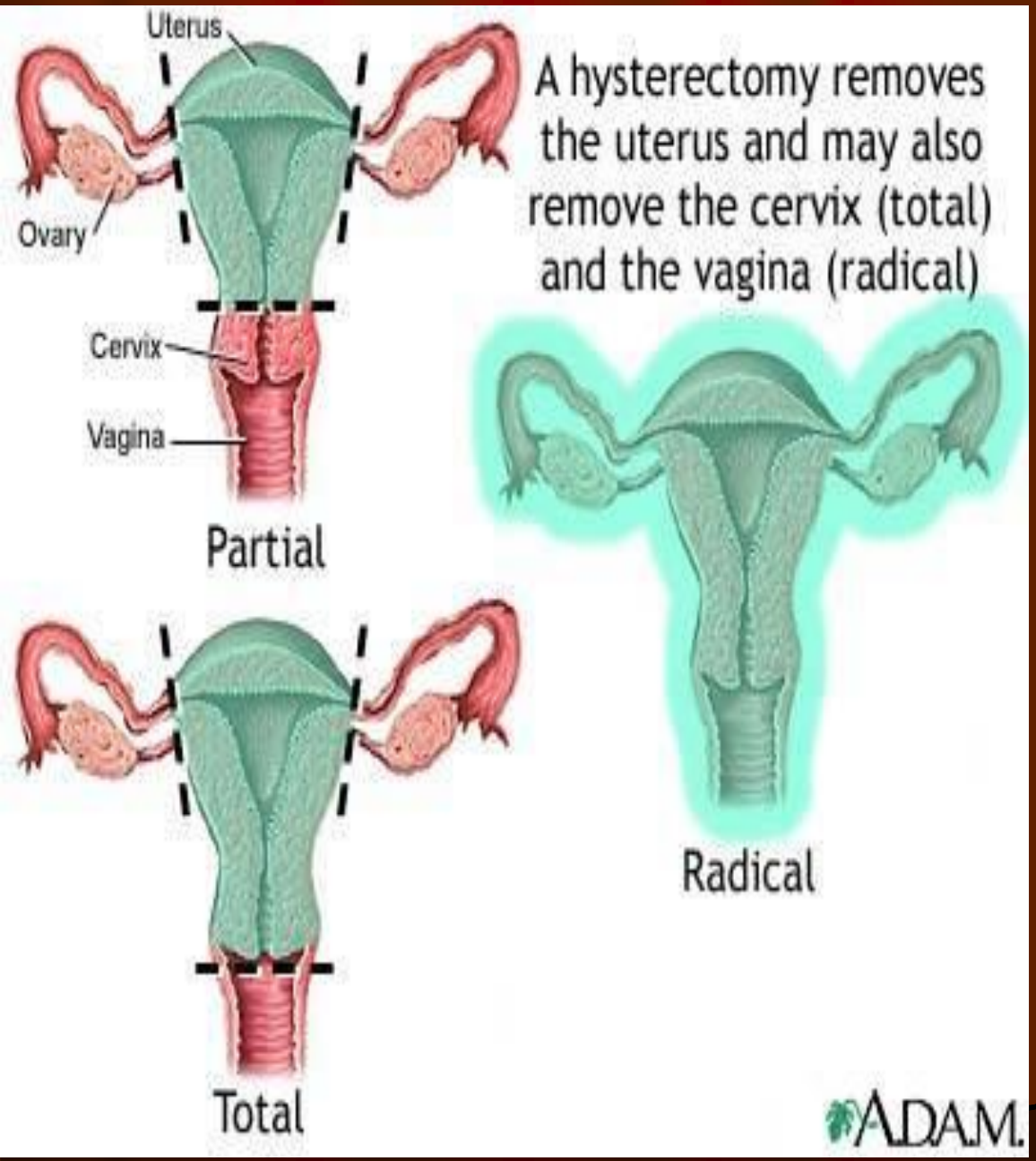


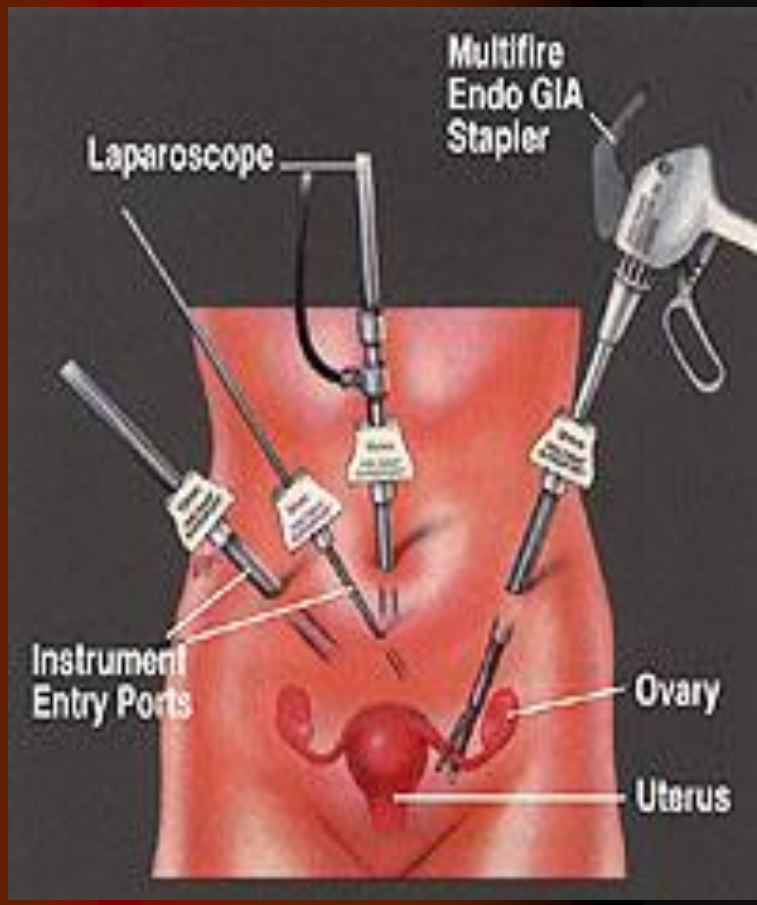
- the patient can return home the same day.
- The mean reduction in endometrial blood loss is 90%.
- Complications include uterine perforation, haemorrhage & fluid overload.

- Hysterectomy: total or subtotal.
- often accompanied by removal of the ovaries (bilateral oophorectomy), the main advantage of which is reduced risk of ovarian cancer,also it is of benefit in women with pelvic pain or severe premenstrual syndrome.

Modes of hysterectomy:

- Abdominal hysterectomy
- Vaginal hysterectomy
- Laparoscopically assisted hysterectomy
- Total laparoscopic hysterectomy


Uterus
Ovary
Cervix
Vagina
Partial
A hysterectomy removes the uterus and may also remove the cervix (total) and the vagina (radical)
Radical
Total
A.D.A.M.


Multifire Endo GIA Stapler
Laparoscope
Instrument Entry Ports
Ovary
Uterus