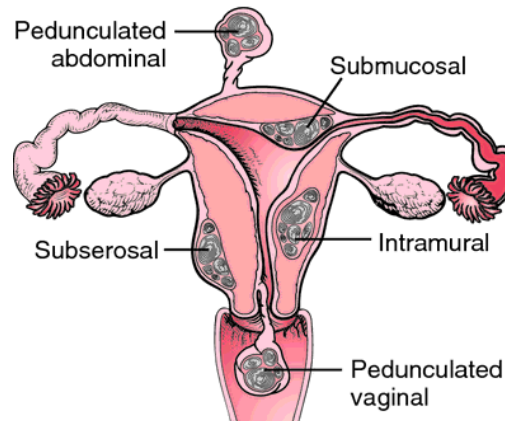




- **Fibroid uterus:** is a benign proliferation of smooth muscle (myometrium) and is also known as leiomyoma (if this proliferation is malignant then it will be called leiomyosarcoma).
- **There are three main types of fibroids:**
 - **Subserosal:** beneath the serosa. This can be pedunculated or with a wide-base.
 - **Intramural:** in the myometrium.
 - **Submucosal:** beneath the mucosa.



- **The clinical presentation depends on the location of the fibroid:**
 - **Subserosal:**
 - ✓ You can feel a movable mass in the abdomen.
 - ✓ If the fibroid is present in the fundus → fundal height will be higher than normal.
 - ✓ Pressure due to compression on other organs (especially ureters → resulting in retention of urine).
 - **Intramural:**
 - ✓ Uterus is enlarged with sensation of heaviness and pain.
 - **Submucosal:**
 - ✓ It is the most common type which causes menorrhagia (heavy menstrual bleeding).
- **What are the causes of fibroids?**
 - **Fibroids are estrogen-dependent.** Therefore, they tend to occur in conditions with increased estrogen levels such as;
 - ✓ Pregnancy.
 - ✓ Hormonal therapy.
 - ✓ Obesity (adipose tissues have aromatase which converts androgens to estrogen).
 - **Soya sauce, soya beans, lemon flower and mint can increase the size of a fibroid.**
- **Cervical fibroid:**
 - It results in an obstructed delivery in a pregnant lady with sensation of heaviness.
 - Might be mistaken with cervical cancer → how to differentiate? → take a biopsy.
- **Investigations done for a patient presenting to your clinic with menorrhagia:**
 - **Ultrasound.**
 - **CBC:** to know if the bleeding is due to other factors such as blood or coagulation disorders.
 - **Thyroid function test:** because hypothyroidism is linked somehow to menorrhagia.



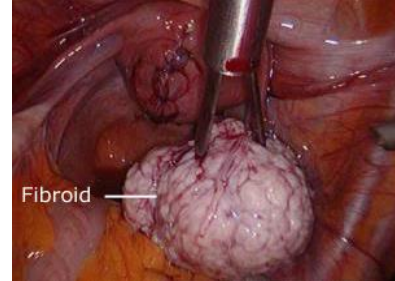
- **Management of fibroids/ menorrhagia:**

• **When is surgery indicated?**

- ✓ Severe menorrhagia which requires frequent admission of the patient to the hospital with frequent blood transfusions.
- ✓ Urine retention which might result in hydronephrosis and subsequent renal failure.
- ✓ Severe pain (due to degeneration of the fibroid) in which even strong pain killers (such as morphine) don't relieve the patient!
- ✓ Fast growing tumor.

• **When is hysterectomy indicated?**

- ✓ When there are multiple fibroids.
 - ✓ Patient is old (post-menopausal).
 - ✓ Malignancy is suspected.
- Otherwise, myomectomy is done.



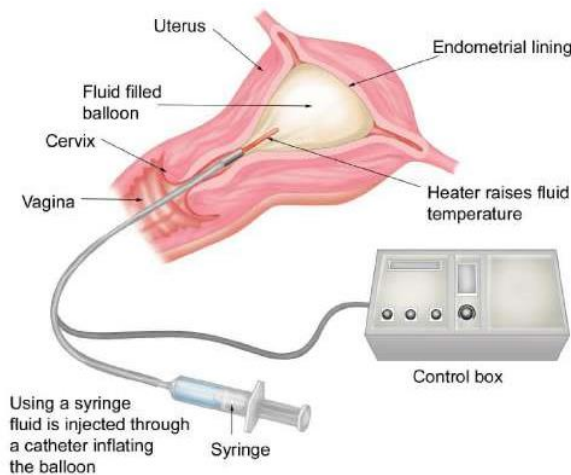
• **Before surgery, medications will be given:**

- ✓ GnRH-analogs: they cause amenorrhea for 6 months with shrinkage of the fibroid but if they fail after this period any myomectomy is planned → it will be very difficult because the fibroid will become strongly adherent.

• **If medications don't work, you can still try hysteroscopic (D & C) which is diagnostic and therapeutic at the same time.**

• **Other options before going to surgery include:**

- ✓ Thermal-balloon ablation: stopping menorrhagia by causing coagulation of the whole endometrial surface.



✓ Uterine Artery Embolization (UAE): Criteria

- ❖ Fibroid size must be < 10 cm.
- ❖ There are multiple fibroids.
- ❖ You are sure that there is no malignancy.
- ❖ No future pregnancies planned.

