BENIGN LESIONS OF THE UTERUS

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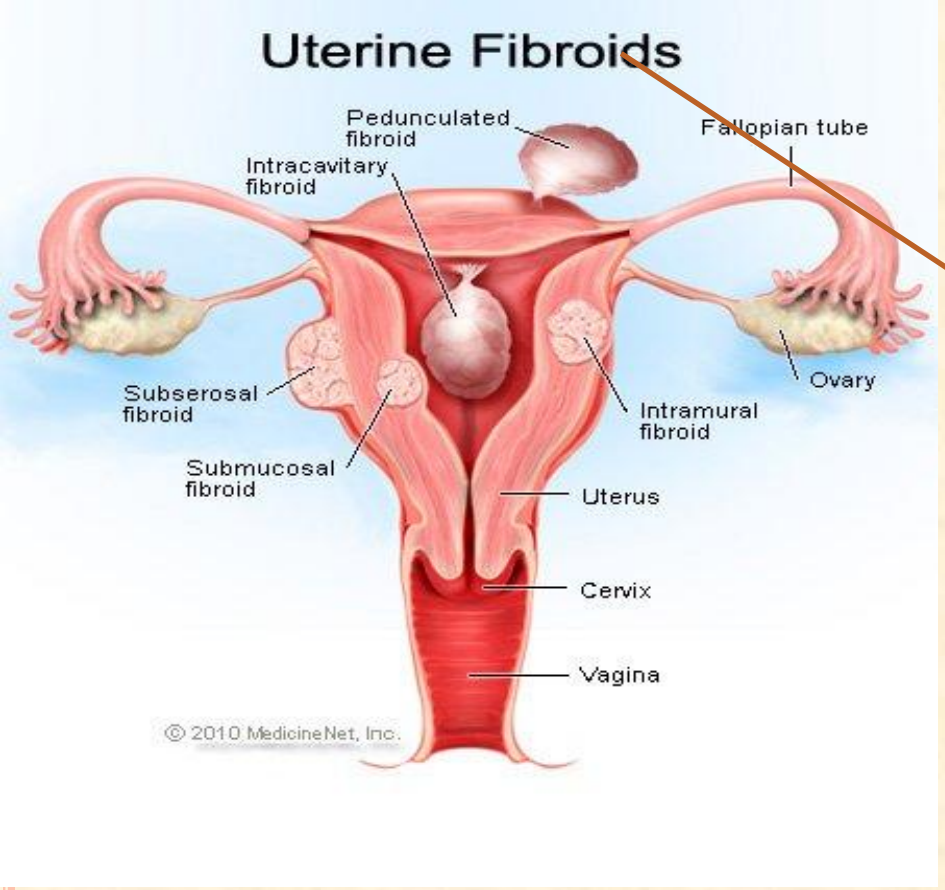
Benign lesions of uterus

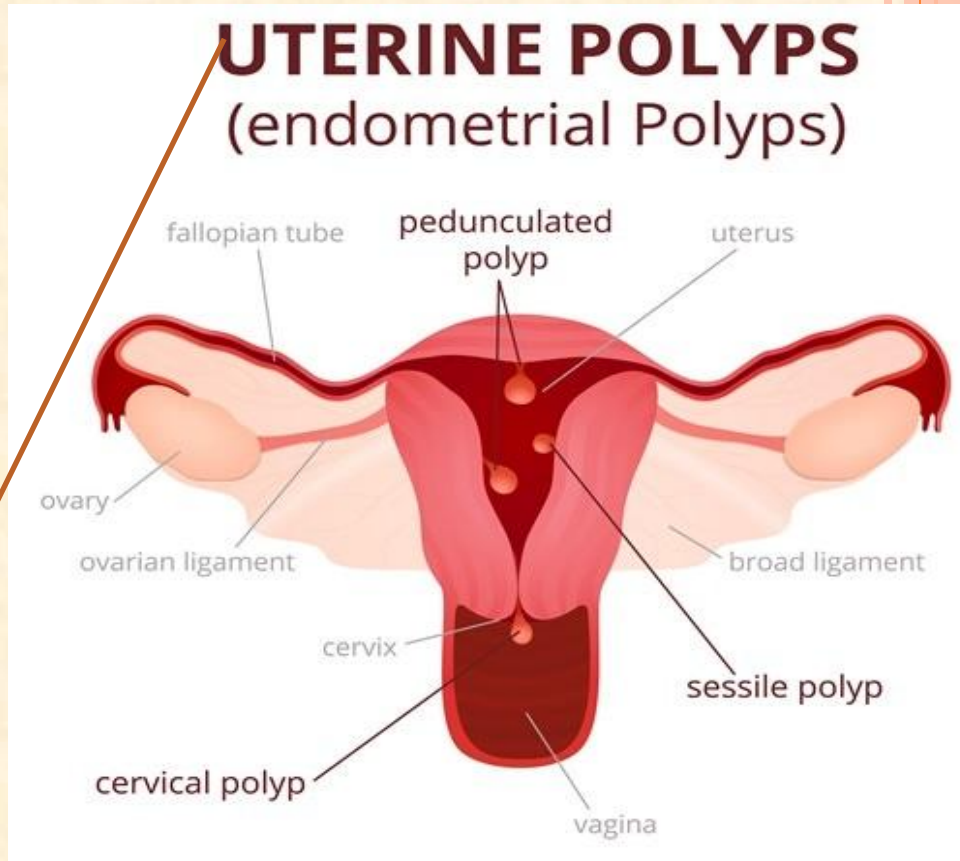
- 1) UTERINE FIBROID / LEIOMYOMATA
  - Commonest benign tumor of uterus
  - Commonest benign tumor in Females

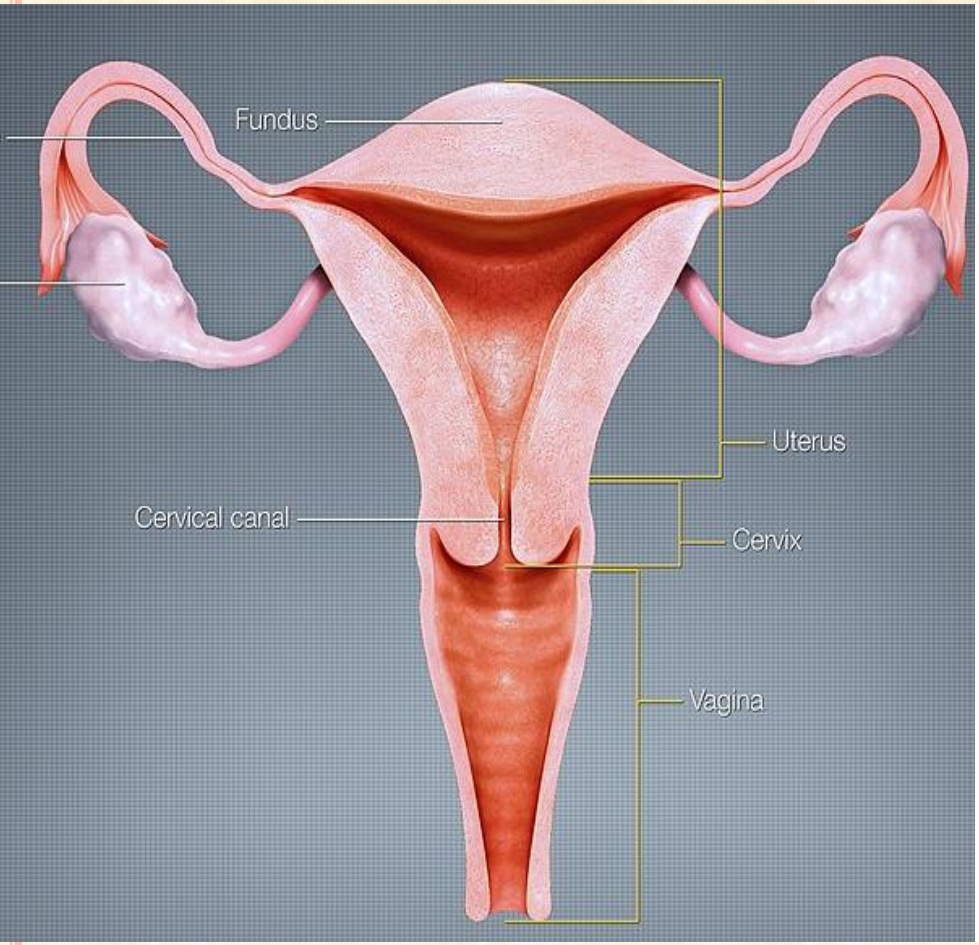
- 2) UTERINE POLYPS
  - Tumor attached by a Pedicle

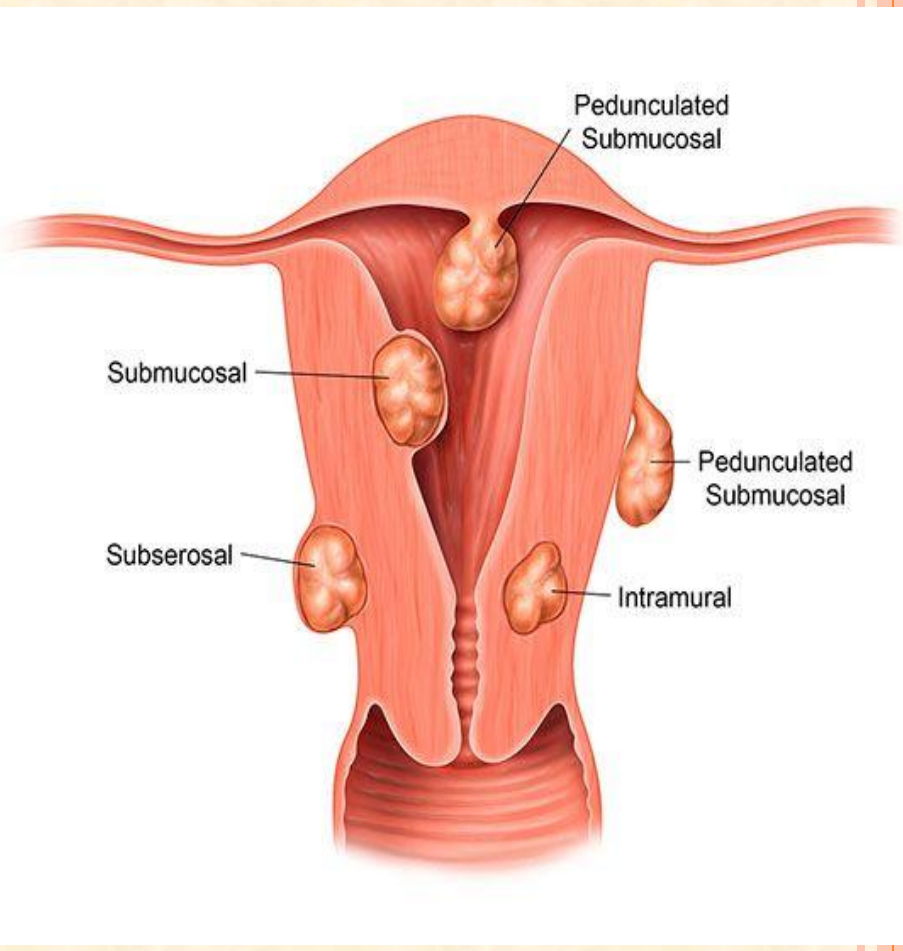


Tumor of Smooth Muscles & Fibrous connecting tissue

Tumor (Mucous, Fibroid, Placental) attached by a pedicle




Fundus
Uterus
Cervical canal
Cervix
Vagina


Pedunculated
Submucosal
Submucosal
Pedunculated
Submucosal
Subserosal
Intramural

FIBROID = LEIOMYOMA = MYOMA = FIBROMYOMA

TUMOR – Fibrous Connective Tussue + Smooth Muscle (Myo)

Number – Single or Multiple

Size – Variable

Growth rate – Slow growing tumor

Malignant potential – Minimal

Sarcomatous changes occurs in less than 1 per 1000

Characteristics-

Spherical, well circumscribed
Pale, firm, rubbery mass
Distinct from surrounding tissue
Does not have true cellular capsule
Whorl like appearance with blood vessels at perephery
Poor blood supply inside fibroid”

- **Incidence**

  - Atleast 20% of woman at age of 30 have got uterine fibroid
  - About 50 % woman – Asymptomatic
  - Higher in – Black coloured woman
    - Nulliparous woman
    - One Child Infertility

- **Prevalance**

  - Highest between 35-45 years age group (Tumor of Reproductive Age Group)
  - Rarely before 20 years of age

Risk factors for uteri fibrod

Increased risk

- Reproductive Age
- Family History
- Nulliparity
- Obesity
- Black Women
- Hyperestrogenic State

Decreased risk

- Multiparity
- Low dose OC pills
- DMPA users
- Smoking

  (Due to associated hypoestrogenism)

CAUSES / AETIOLOGY

- **Unclear**
- **Genetic Alteration:** –

  - Abnormality in chromosome (particularly in 6/7)

  - Abnormal cellular proliferation
- **Growht Factors:-**

  - IGF, EGF, TGF

  - stimulates directly of via oestrogen
- **Hormones:-**

  - Estrogen dependant tumor

  - Estrogen + Progesterone

  - Fibroid tissue contains more ER, PR than normal uterine muscle cells

  (ER – Estrogen Receptor. PR- Progesteron Receptor)

- Estrogen – stimulates proliferation of smooth cells
- Progesteron – increases production of proteins that interfers with apoptosis (programmed cell death)
- **Hormone dependancy evidenced by –**

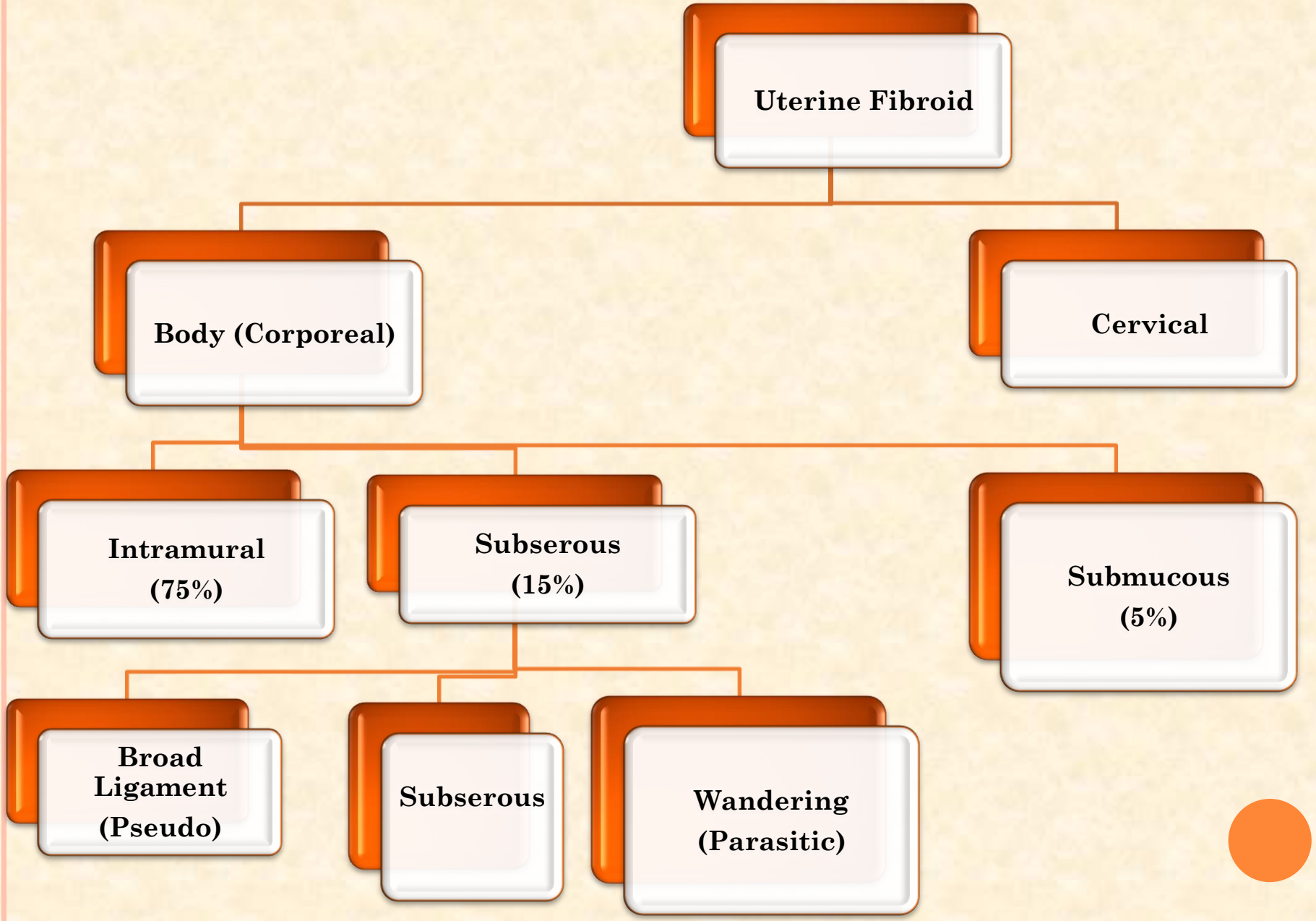
  - rarely develop before menarche

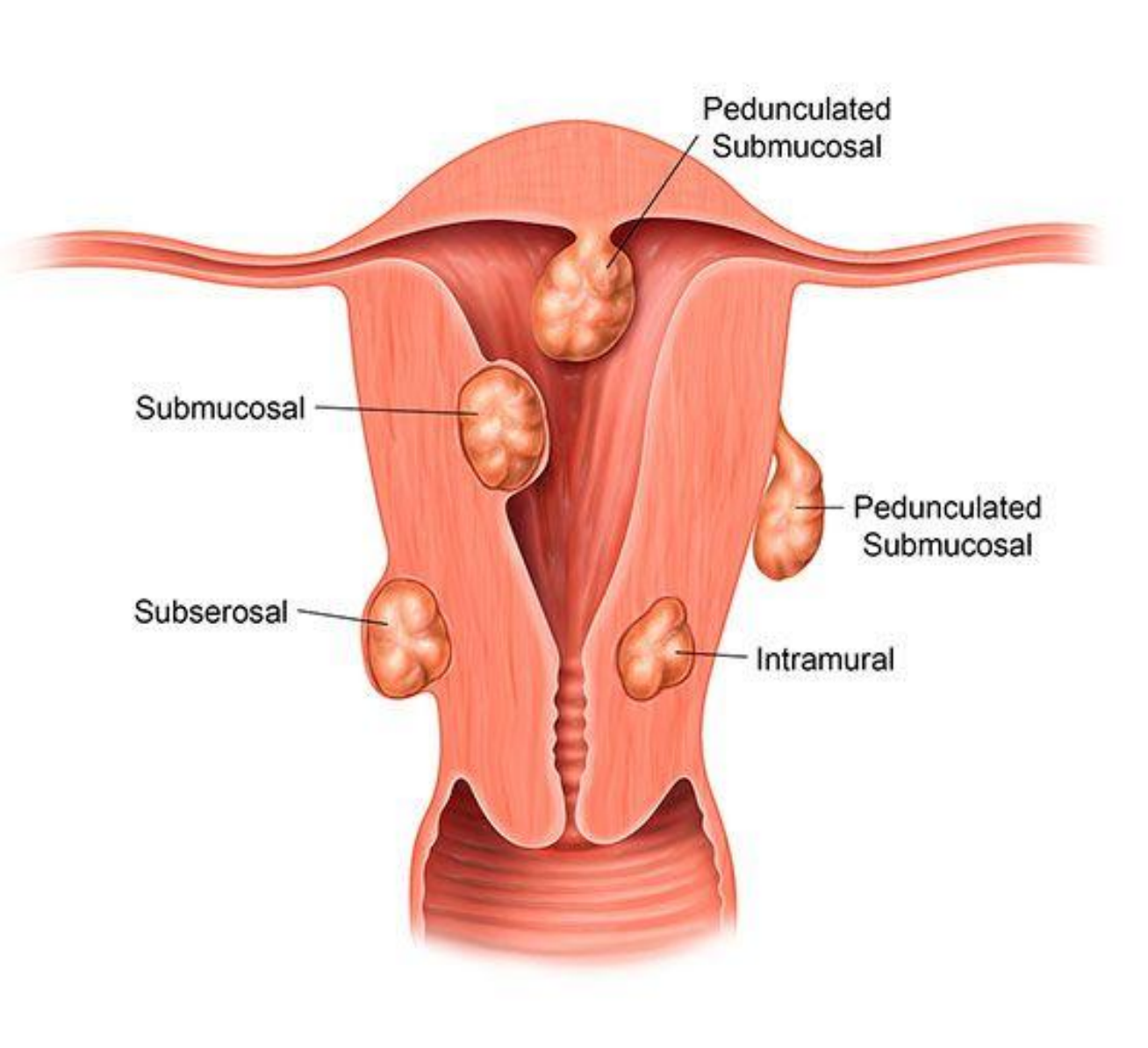
  - seldom develop or increases after menopause

  - enlarges during pregnancy

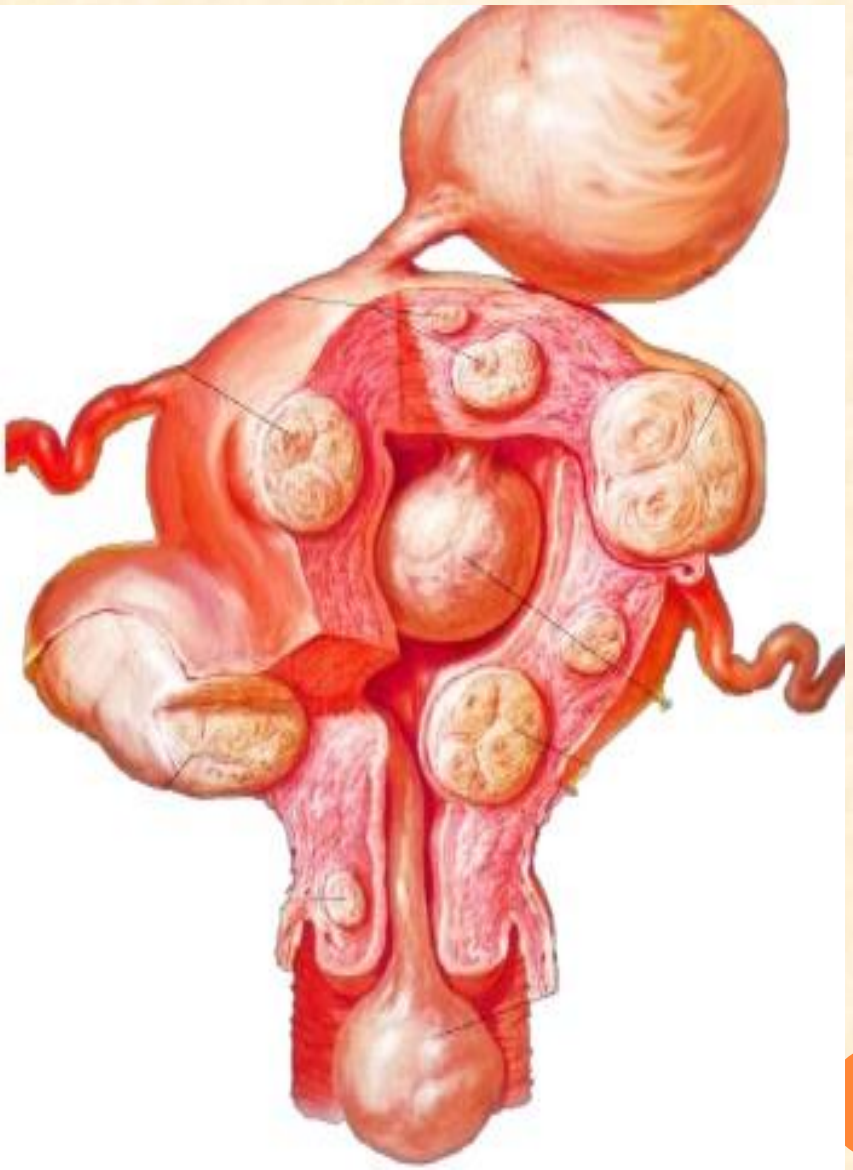
  - tissue shows more ER, PR

  - frequent association of anovulation


Uterine Fibroid
Body (Corporeal)
Cervical
Intramural (75%)
Subserous (15%)
Submucous (5%)
Broad Ligament (Pseudo)
Subserous
Wandering (Parasitic)


Pedunculated
Submucosal
Submucosal
Pedunculated
Submucosal
Subserosal
Intramural

Fibroids are **usually located in** the **body** and are usually **multiple**

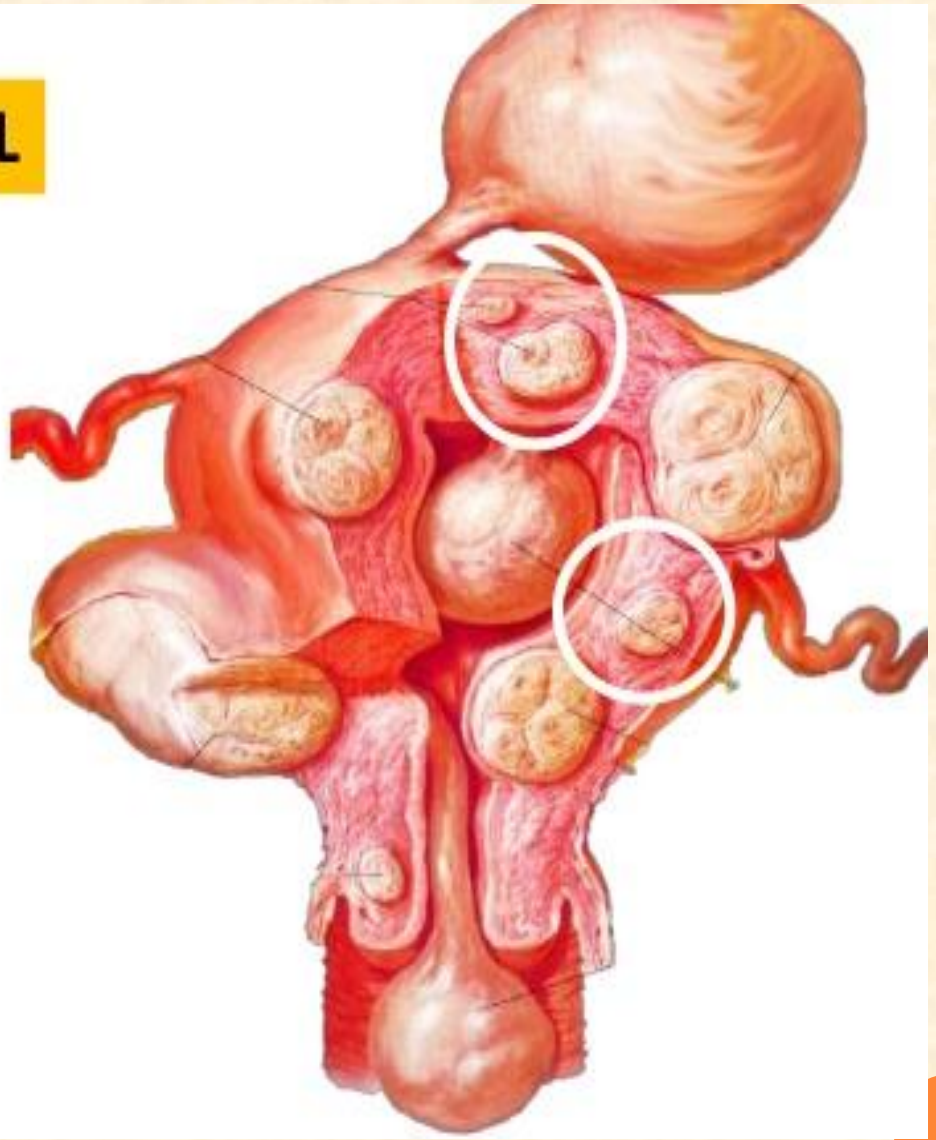


INTERSTITIAL/INTRAMURAL

Initially, fibroids are intramural in position but subsequently, some are pushed outward or inward

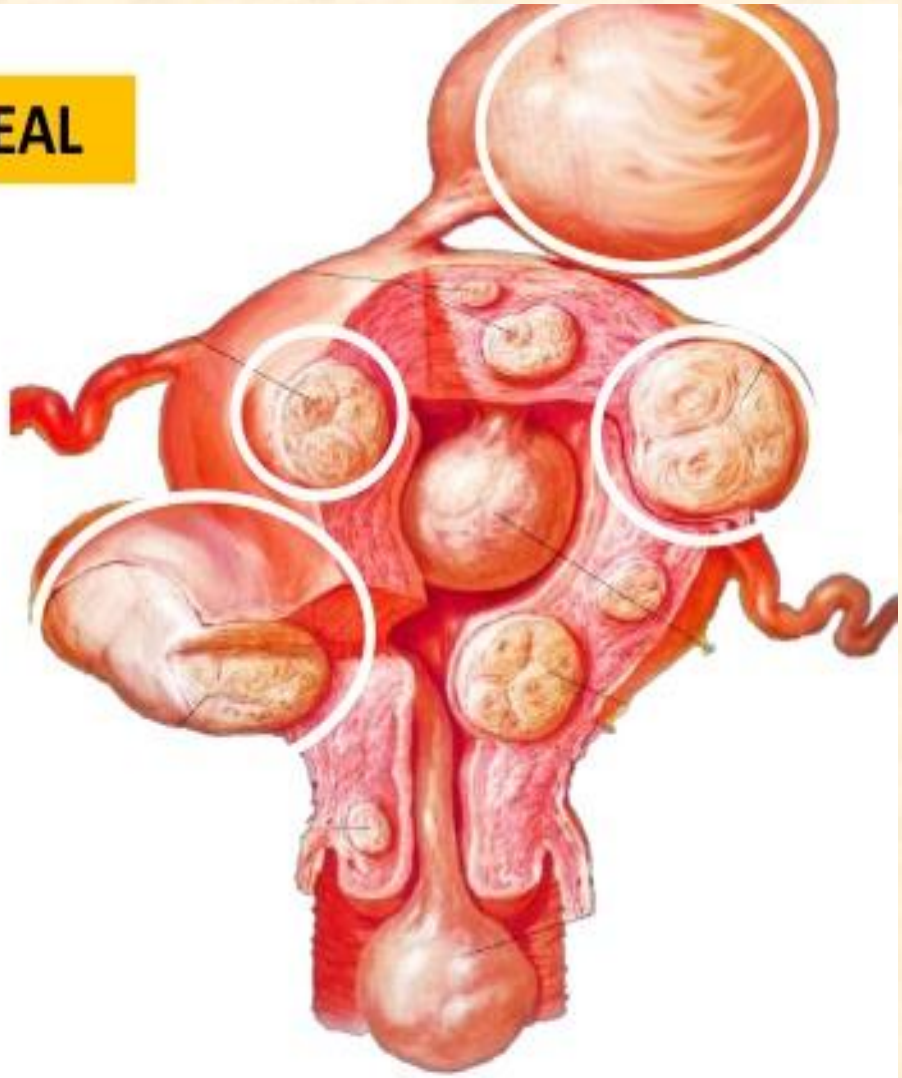
about 70%

persist in that position



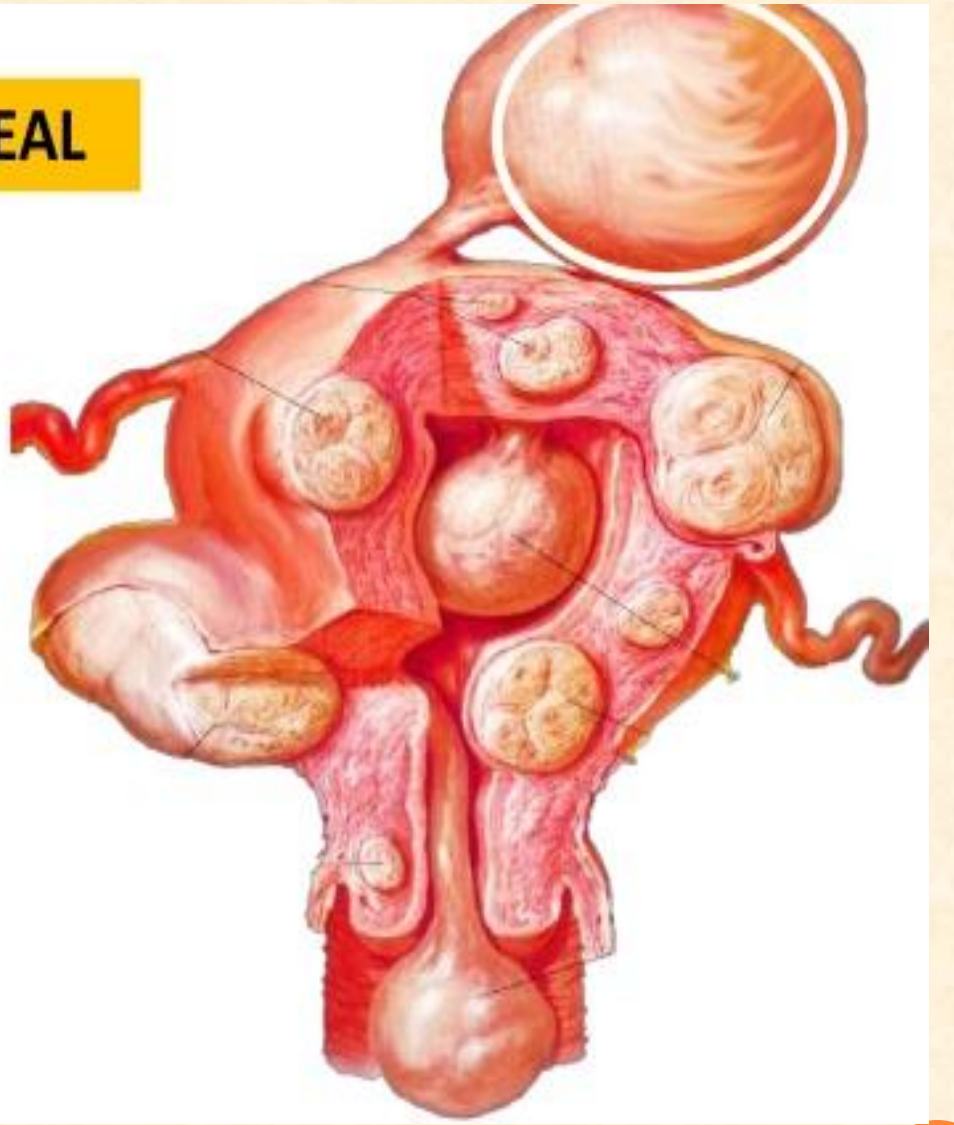
SUBSEROSAL/SUBPERITONEAL

Intramural fibroid is pushed outwards towards the peritoneal cavity



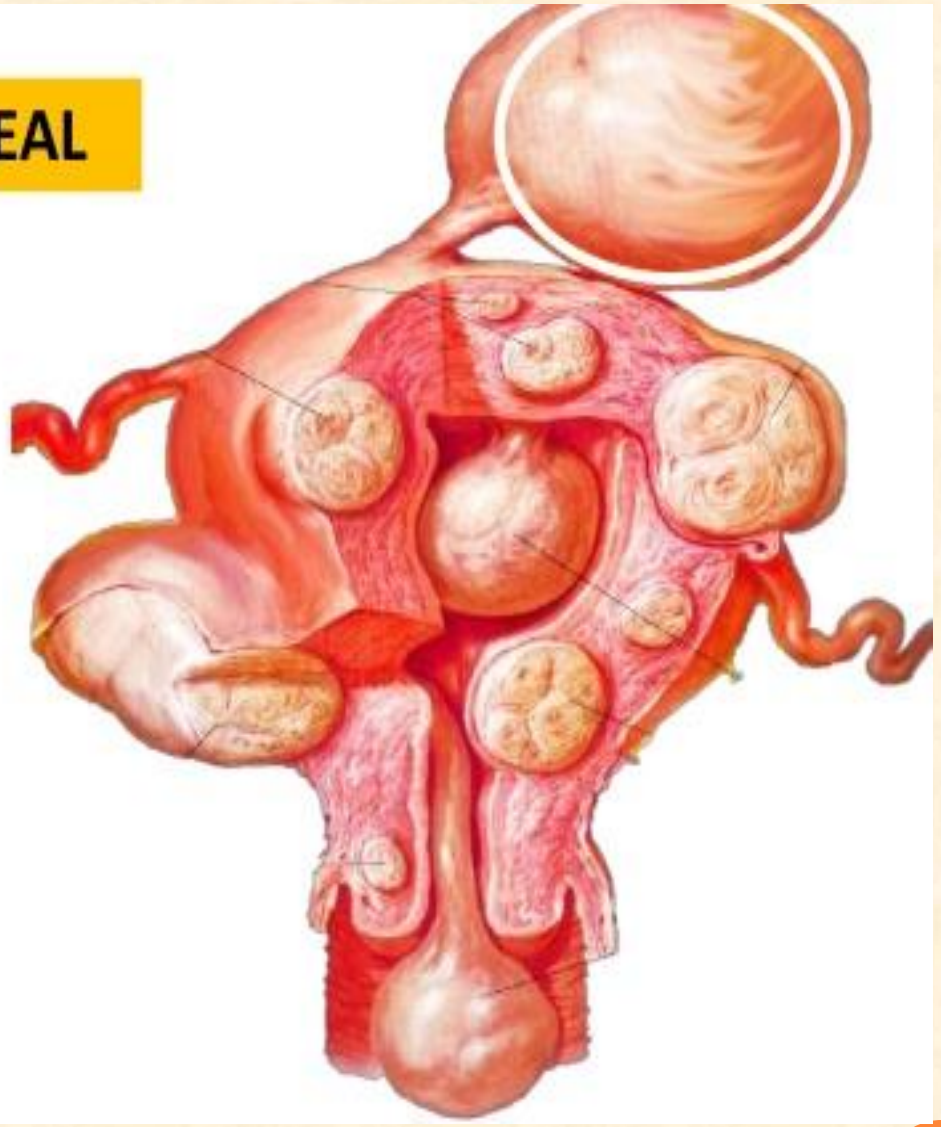
SUBSEROSAL/SUBPERITONEAL

When it completely covered by peritoneum, it usually attains a pedicle – "**pedunculated subserosal fibroid**"



SUBSEROSAL/SUBPERITONEAL

On rare occasion, the pedicle may be torn; the fibroid gets its nourishment from the omental or mesenteric adhesions – **"wandering/parasitic fibroid"**

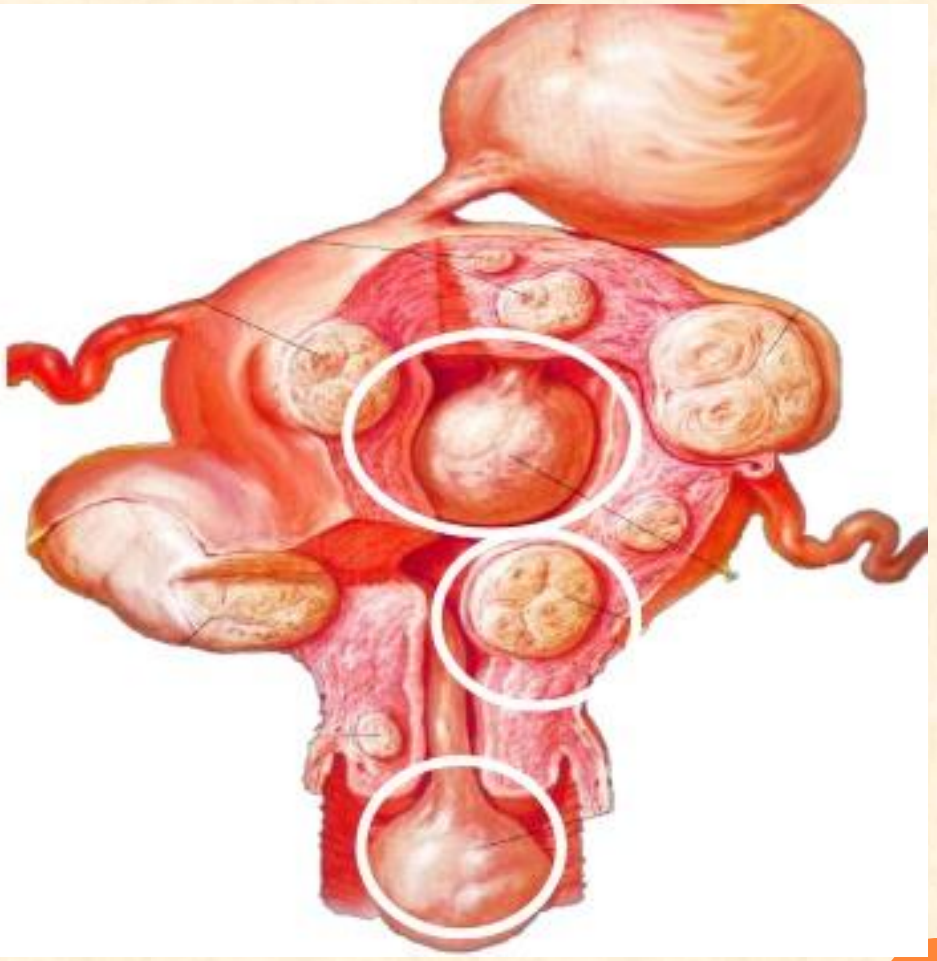


LEAST COMMON TYPE BUT MAXIMUM SYMPTOMS

SUBMUCOSAL

Intramural fibroid, when pushed toward the uterine cavity and is lying **under the endometrium**

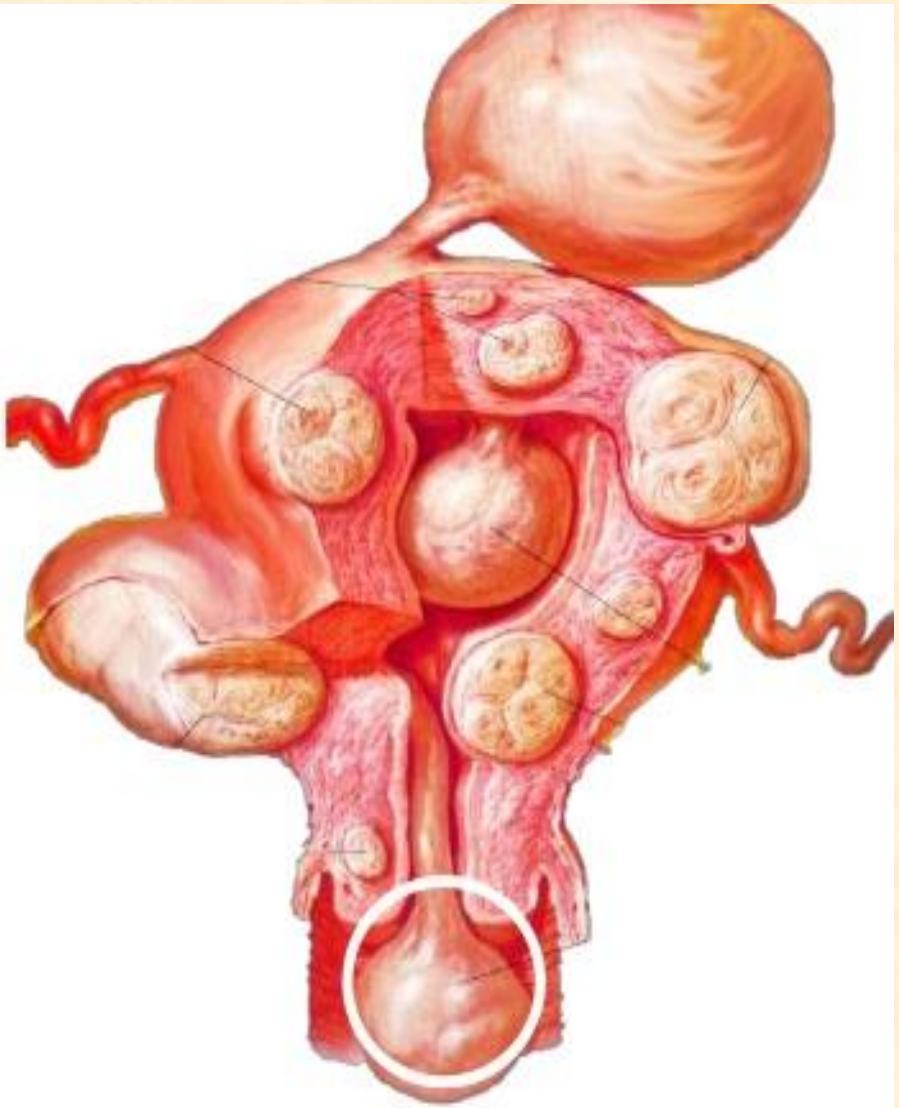
Can make the uterine cavity IRREGULAR & DISTORTED



SUBMUCOSAL

Pedunculated submucosal fibroid may come out through the cervix

May be infected/ulcerated to cause METRORRHAGIA

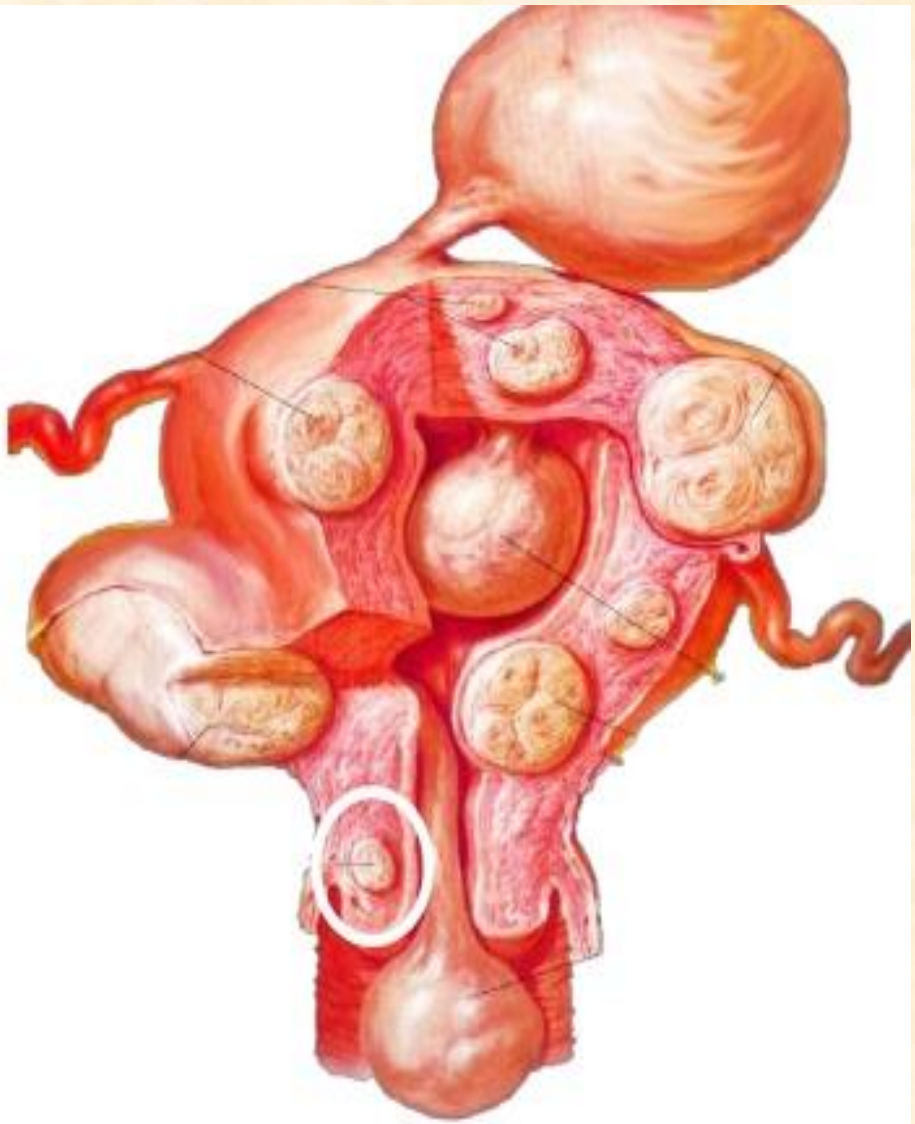


CERVICAL

Rare (1-2%)

May be anterior, posterior, lateral or central

May displace the cervix or expand it so much that the external os is difficult to recognize



SECONDARY CHANGES IN FIBROID

- **D**egeneration
- **A**trophy
- **N**ecrosis
- **I**nfections
- **V**ascular changes
- **S**arcomatous change

DANIVaS

- **V**ascular changes

  - Telangiectasis (Dilatation of vessels) OR

  - Lymphangiectasis (Dilatation of lymphatic channels)

- **S**arcomatous change

  - in less than 0.1 % cases

  - Common - Leiomyosarcoma

- **Degeneration**

  - Hyaline degeneration (Most Common – 65%)

  - Cystic degeneration

  - Fatty degeneration

  - Calcific degeneration (10%) – womb stone

  - Red degeneration (Carneous degeneration)

- **A**trophy- due to loss of support from estrogen
  - following menopause
  - following pregnancy enlargement

- **N**ecrosis- due to circulatory inadequcy there is central necrosis of tumor

- Infections- access through thinned & sloughed surface epithelium of submucous fibroid
  - following delivery or abortion
  - intramural fibroid may also infected following delivery

OTHER COMPLICATIONS OF FIBROID

- Haemorrhage
  - intracapsular
  - intrperioneal due to rupture surface vein of subserous fibroid
- Polycythemia
  - Erythropoietic function by tumor
  - Altered erythropoietic function of kidney through ureteric pressure
- Torsion of subserosal pedunculated fibroid
- Parasitic fibroid
- Inversion of Uterus
- Endometrial hyperplasia
- Myohyperplasia
- Accompanying adenomyosis
- Endometrial carcinoma associated with fibromyoma

SYMPTOMS

- MENSTRUAL DISTURBANCE
- PAIN
- INFERTILITY , RECURRENT ABORTIONS
- ABDOMINAL LUMP
- PRESSURE SYMPTOMS
- VAGINAL DISCHARE

Pregnancy complication due to fibroid

- Ectopic pregnancy
- Abortions
- Abnormal lie / presentation of fetus
- Premature rupture of membrane
- Premature labor
- Dystocia due to secondary low segment myoma
- Increase operative deliveries
- Post partum hemorrhage
- Inversion of uterus
- Red degeneration of fibroid

- MENSTRUAL DISTURBANCE

  a) Menorrhagia : (30%)

  - mostly in Intramural / Submucous fibroid
  - due to incresed vascularity, endometrial hyperplasia & enlarged uterine cavity

  b) Metrorrhagia (Irregular bleeding) :

  - ulceration of submucous fibroid / fibroid polyp
  - torn vessels from the sloughing base of polyp
  - associated endometrial carcinoma

  c) Dysmennorrhea

  - dysrhthmic uterine contraction
  - pelvic congestion

- PAIN:

  - Usually Pain less

  - Dragging pain in lower abdomen, Low backache

  - Reason of pain :

  a) Due to tumor – Degeneration
  - Torsion
  - Extrusion of polyp

  b) Associated pelvic pathology
  - Endometriosis
  - Adenomyosis
  - PID

- SUBFERTILITY / RECURRENT ABORTIONS

Reasons:

- Impaired sperm transport or ascent due to Distortation/Elongation of uterine cavity
- dysrhythmic contraction during intercourse
- Menorrhagia and dyspareunia
- Defective implantation
- Less space for fetal growth
- Cornual tubal block due to position of fibroid
- Marked elongation of tube over big fibroid
- Associated salpingits / PID
- Anovulation
- Endometriosis

- Abdominal Lump:

  - feeling of heaviness in lower abdomen

  - when it grows lump may felt per abdomen

- Pressure Symptoms:

  Bladder – frequency and retention of urine
  Recurrent UTI, dysuria

  Ureter - Hydroureter & Hydronephrosis

  Rectum- Constipation

- Vaginal Discharge

  - Rare

  - often blood stained

SIGNS

- **Abdominal Examination**

Palpation:

- asymmetric enlargement of uterus
- firm, hard uterine mass
- arising from pelvis
- well deffined margins
- nodular surface
- mobile from side to side, restriced in adhesions

Percussion: Dull node on percussion

Auscultation: Uterine souffle may audible due to pelvic congestion

- Pelvic Examination: (Bimanual examination)
  - irregular enlargement of uterus
  - uterus not felt separated from swelling
  - cervix moves with movement of tumor felt per abdomen

Exception- Subserous pedunculated fibroid

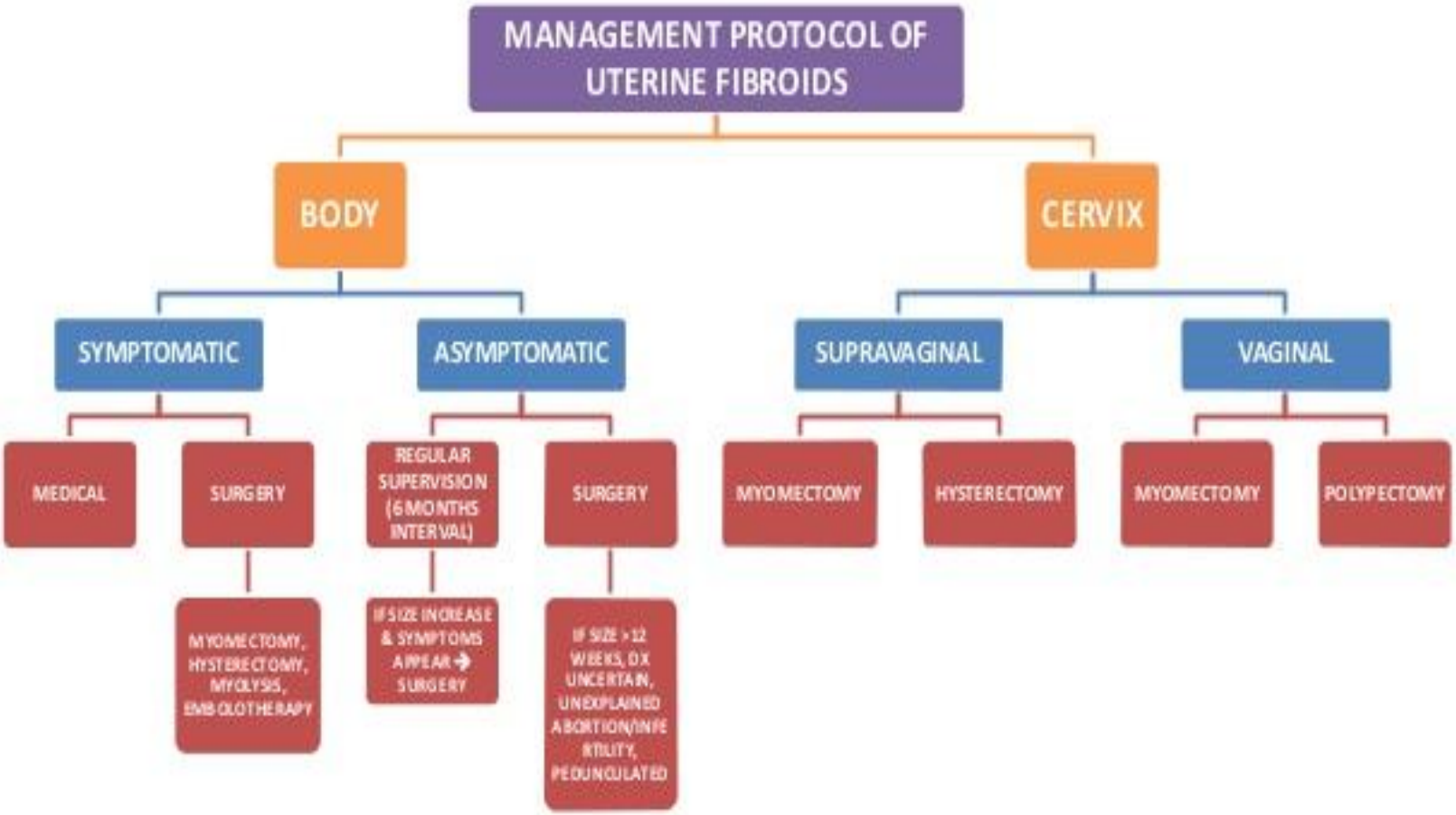
Differential diagnosis

- Full bladder
- Pregnancy
- Ectopic pregnancy
- Bicornuate uterus
- Hematometra / Pyometra
- Adenomyosis
- Chronic PID
- TO mass
- Benign / Malignant ovarian tumor
- Carcinoma of body of uterus
- Choriocarcinoma
- Sarcoma

INVESTIGATION

- **AIMS** - TO confirm the diagnosis
  - Preoperative assessment

- Hemogram ,Blood group – Anemia/ Polycythemia
- USG – Abd + Pelvis
- HSG – (to identify submucous fibroid / polyp)
- Hysteroscopy
- D & C (to rule out Endometrial cancer)
- Laparoscopy
- MRI (to identify adenomyosis, myoma)
- IVP (Intravenous Pyelography)


MANAGEMENT PROTOCOL OF UTERINE FIBROIDS
BODY
CERVIX
SYMPTOMATIC
ASYMPTOMATIC
SUPRAVAGINAL
VAGINAL
MEDICAL
SURGERY
REGULAR SUPERVISION (6 MONTHS INTERVAL)
SURGERY
MYOMECTOMY
HYSTERECTOMY
MYOMECTOMY
POLYPECTOMY
MYOMECTOMY, HYSTERECTOMY, MYOLYSIS, EMBOLOTHERAPY
IF SIZE INCREASE & SYMPTOMS APPEAR → SURGERY
IF SIZE > 12 WEEKS, DX UNCERTAIN, UNEXPLAINED ABORTION/INFERTILITY, PEDUNCULATED

- Asymptomatic – - No treatment needed
  - Supervision

- Symptomatic:
  a) Medical management
  b) Surgical management

Medical management

- Objectives:

  - to improve menorrhagia

  - to minimize size & vascularity

  - alternative to surgery in perimenopausal woman or with high risk factors for surgery

  - where postponement of surgery is planned temporarily

1) Antifibrinolytics: eg Tanaxemic acid

2) Progesterone :- oral / injectables

- to control hemorrhagia

- Progesteron only pills / Inj. DMPA

3) Antiprogesterones:

- reduces size of fibroid

mifepristone 25mg daily for 3 months

4) Danazol:

- reduces size of fibroid / control blood loss

- dose : 200 – 400 mg for 3 months

5) GnRH agonist:

- sustained pitutiary downregulation and suppression of ovarian function

-eg. Goseralin, luporelin, buserlin, nafarelin

6) GnRH antagonist:

- immediate suppression of pitutary & ovaries

- eg. Cetrorelix , ganirelix

7) PG synthetase inhibitors

- to relieve pain

8) LNG-Intrauterine device/system : (Mirena)

- reduces blood loss and uterine size

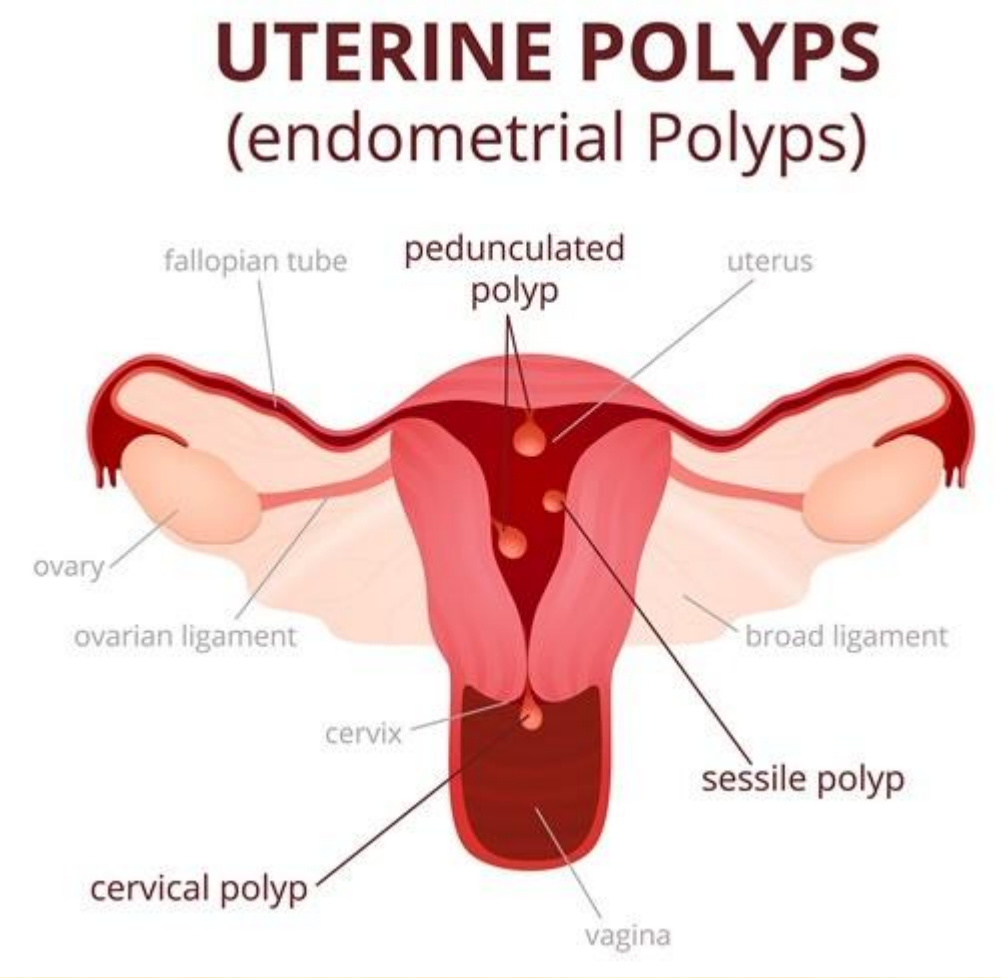
Surgical management

- Myomectomy – enucleation of myomata from the uterus leaving behind a potentially functioning organ capable of future reproduction
- Embolotherapy – embolisation of uterine arteries causes avascular necrosis followed by shrinkage of fibroid

  - Polyvinyl alcohol particles through percutaneous femoral catheterisation
- Endometrial ablation with hysteroscopic resection
- laser ablation
- Roller ball balloon therapy for ablation
- Hysterectomy

UTERINE POLYPS

2



- Polyp - Tumor attached by a pedicle
- Uterine polyps are benign polyps comprising :

    1) Endometrial polyp

    2) Fibroid polyp

    3) Placental polyp

- Malignant changes may occur

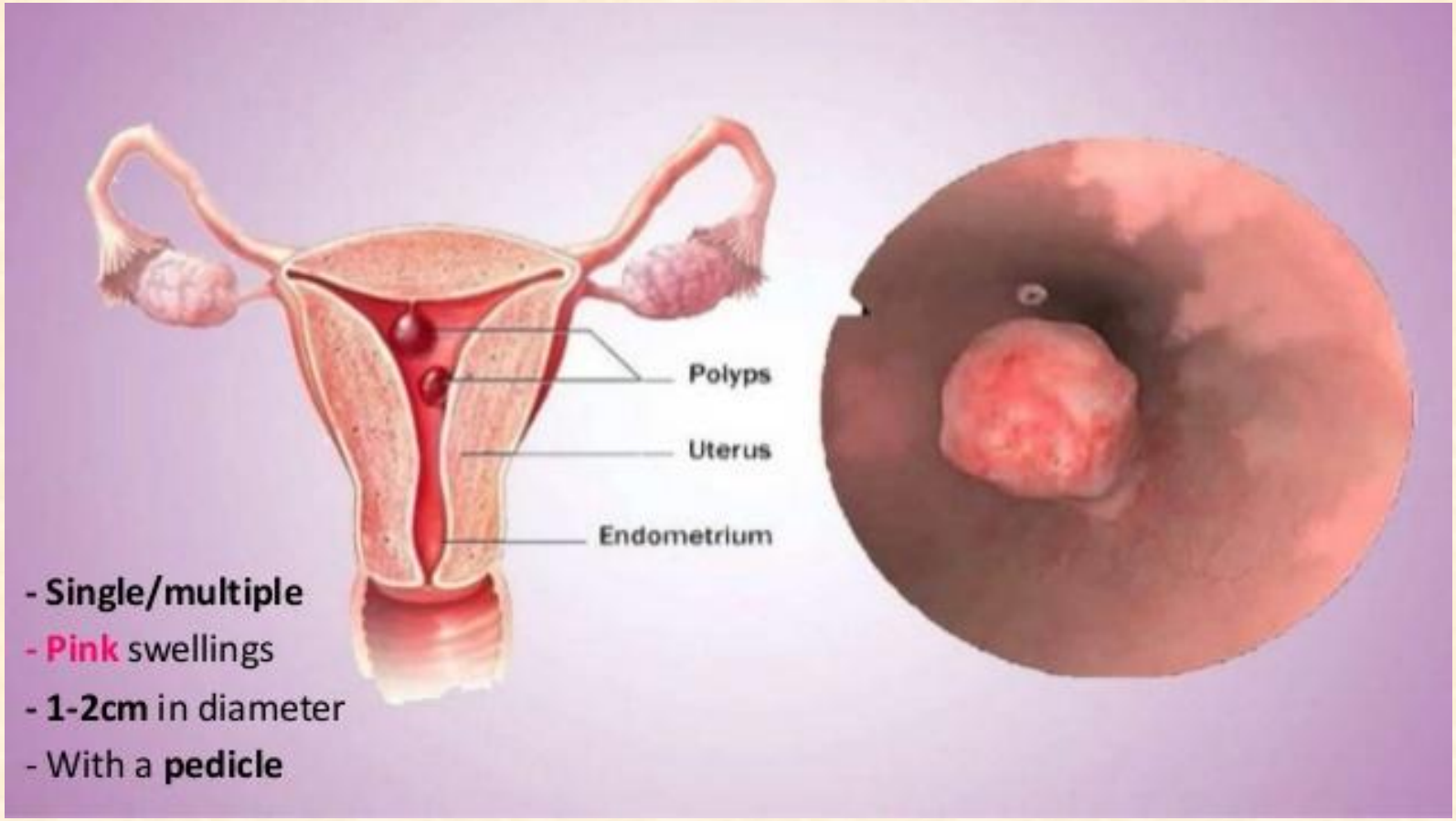
  i) Endometrial polyp – Adenocarcinoma

  ii) Fibroid polyp - Sarcoma

  iii) Placental polyp - Choriocarcinoma

Endometrial Polyp:

- Commonest type of benign polyp
- Location – Body of Uterus / Cervix (endocervix)
- Mostly arises from hyperplasia of endometrium
- Some of endometrial lining protruding into the uterine cavity as a polyp
- Arise from basal endometrium surrounded by functional endometrium
- Composed of endometrial glands and stroma
- Unresponsive to hormones


Polyps
Uterus
Endometrium
- Single/multiple
- Pink swellings
- 1-2cm in diameter
- With a pedicle

- Fibroid Polyp:

  - due to extrusion of submucous fibroid into uterine cavity

  - cervical polyp – usually from ectocervix and from its posterior lip

- Placental Polyp

  - formed from retained placental tissue

Clinical features

- Intermenstrual bleeding
- Colicky pain in lower abdomen
- Sensation of something coming down
- Irregular vaginal discharge – may be offensive in case of infection
- Postmenopausal bleeding
- Postcoital bleeding (polyp protrudes through os)

DIAGNOSIS

- Clinically , uterine polyp may not be evident and uterus may or may not be enlarged
- It is easy to diagnose when polyps protrues through cervical canal

- Sound test- to differentiate a fibroid polyp from chronic inversion of uterus
- Ultrasound can detect uterine polyp
- Saline infusion sonography
- Hysterosalpingography
- Hysteroscopy

MANAGEMENT

- D & C can scrap the polyp
- Hysteroscopic removal of polyp
- Cervical polyp – by twisting of the pedicle and cauterization of pedicle
- Hysterectomy – - Recurrent
  - malignant changes,