Uterine Fibroid

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Dr Gopalan Poovalingam's special interests include:

- Endometriosis/painful periods
- Uterine fibroids
- Ovarian cysts
- Urinary incontinence

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06/2025

Definition:

Uterine fibroids (also known as leiomyoma) are benign (non-cancerous) smooth muscle tumours that develop within the myometrium of the uterus. They are the most common pelvic tumours in women.[1]

Epidemiology:[1]

- Prevalence: Affects up to 70–80% of women by age 50. 50% may be symptomatic.
- Peak incidence: Women aged 30–50 years.
- Ethnic disparity: More common, larger, and symptomatic in Women of African descent compared to women of Caucasian or Asian descent.2

Type of fibroid is based on their location.[1]

- Submucous fibroids (partly or wholly within the uterus)
- Intramural fibroids (within the wall of the uterus)
- Subserous fibroids (on the outside the wall of the uterus)
- Pedunculated fibroids (fibroids on a stalk)

Risk Factors:

- Age (30–50 years)
- Family history
- African descent
- Nulliparity
- Obesity
- Early menarche
- High red meat consumption
- Vitamin D deficiency

Symptoms of uterine fibroids

Most patients with uterine fibroids can be asymptomatic. However, in some cases, it can lead to:

- Heavy/excessive bleeding
- Painful periods
- Swelling over the pelvic/abdomen region
- Infertility (especially submucous fibroids)
- Bladder and bowel pressure symptoms – increased urinary frequency, incontinence, voiding dysfunction, constipation
- Pregnancy related complications- IUGR, preterm labour, postpartum haemorrhage, increased operative delivery

How are uterine fibroids diagnosed?

- Pelvic examination - some of the fibroids especially the larger ones can be palpated
- Pelvic ultrasound - first line investigation
- Pelvic MRI - to map all the fibroids and to rule out atypical fibroids [2]
- Saline infusion sonohysterography - Better for evaluating submucosal fibroids
- Hysteroscopy – direct visualization to confirm and differentiate type of submucosal fibroids

Management of uterine fibroids

Aims of management [3]

- Alleviate symptoms (e.g. heavy bleeding, pain, pressure symptoms).
- Improve quality of life.
- Preserve or restore fertility (when desired).
- Minimize invasiveness and treatment-related complications.

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Factors that may influence the treatment options

- Age and menopausal status.
- Desire for fertility.
- Fibroid size, number, and location.
- Severity of symptoms.
- Patient preference.
- Access to resources and surgical expertise.
- Surgeon's experiences - laparoscopy/robotic/laparotomy/ open surgery

Conservative Management

- for asymptomatic patients (not experiencing excessive bleeding and pressure symptoms)
- for patients nearing menopause and remains asymptomatic

Medical Management

Non Hormonal

- NSAIDS- for dysmenorrhoea.
- Tranexamic Acid- to reduce heavy bleeding.

Hormonal Medications [4]

- Combined OCP- to control bleeding.
  Side effects- headache, migraine, weight gain etc.
- Oral progestins (Primolut /Provera)-to control bleeding- side effects: irregular bleeding, abdominal bloating etc.
- Mirena- to control bleeding-
  Only suitable for non-distorted and normal size cavity.
- GnRH agonist (Leuprolide vs Goserelin)- to shrink uterine fibroids and control bleeding.
  Side effects- menopausal symptoms, bone mineral density loss.
- GnRH antagonist (Ryeqo)- to shrink uterine fibroids and control bleeding.
  Side effects- menopausal symptoms, headache.

Non-Surgical minimally invasive procedures

Uterine Artery Embolization - Occludes uterine arteries, inducing ischemic necrosis of fibroids [5]

- Contraindications:
  - Pregnancy
  - Women who desire for future fertility
  - Active pelvic infection
  - Suspected malignancy
- Complications:
  - Postembolization syndrome
  - Ovarian failure (especially >40 years)
  - Rare infection or sepsis

MRI guided Focus Ultrasound (MRgFUS)

- Non-invasive, outpatient thermal ablation.
- Ideal for few, well-located fibroids.

Limitations: Cost, availability, and patient selection criteria.

Myomectomy.

Hysteroscopy resection

- Ideal for submucosal/ intracavity fibroid

Limitations - may need to repeat the procedure for larger intracavity fibroid, intracavity adhesions, uterine perforation, bleeding

Laparoscopic Myomectomy

- For symptomatic women who desire pregnancy.
- performed by a surgeon with advanced laparoscopic skills
- the surgeon must have vast experience on contained morcellation

Benefits: fast recovery, less pelvic adhesions, reduced DVT risks

Limitations - may not be ideal for multiple large fibroids. Higher risk of uterine rupture compared to open surgery especially among large deeper fibroids. Complications include- bleeding, risk of converting to open surgery, risk of surrounding organ injury.

Laparotomy / Open Myomectomy

- For symptomatic women who desires pregnancy.
- Ideal for large uterus with multiple large uterine fibroids and reduced mobility

Limitation- longer recovery, increase risk of pelvic adhesions, DVT. Complications include- bleeding, risk of surrounding organ injury

Hysterectomy

- **For symptomatic women who do not desire of future pregnancy. It is a definitive treatment.**
- can be performed via laparoscopic vs vaginal vs laparotomy depending on the surgeon's expertise

Complications include- bleeding, higher risk of surrounding organs damage compared to myomectomy, may increase risk of earlier menopause and urinary incontinence/ vaginal prolapse

Prognosis

- Most fibroids shrink after menopause.
- Recurrence after myomectomy: 15–30% within 5 years.
- Malignant transformation into **leiomyosarcoma** is rare (<1 in 1,000).

References

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