

# Surgical Management of Uterine Fibroids in a Tertiary Care Hospital

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**Abstract:** *Leiomyomas are benign smooth muscle tumours that begin in the myometrium and affect between 20 and 25 percent of symptomatic and 70 to 80 percent of asymptomatic women of reproductive age. Objective: To study the different modalities of surgical management of uterine fibroids, peri - operative and post - operative complications of various methods of myomectomy conducted and final outcomes in a tertiary care teaching hospital. Methodology: A hospital - based prospective study was conducted in the obstetrics and gynaecology department, tertiary care center from 1st April to 1st November 2022. Results: 62 patients of different age groups and parities are studied with the mean age 37 years. Most common complaints include menstrual symptoms 80%, urinary frequency 2%, abdominal mass 11% and infertility 2%. Hysterectomy was done in 66% of cases, myomectomy in 30%, hysteroscopic resection in 2% and cesarean myomectomy in 2%. Complications included blood loss, post operative pyrexia and wound infection. Conclusions: The most prevalent benign tumour in women of reproductive age that affects fertility and general health is a fibrous uterus, requiring surgical management, hysterectomy being the most common modality of surgery.*

**Keywords:** myomectomy, fibroids, leiomyomas, abnormal uterine bleeding

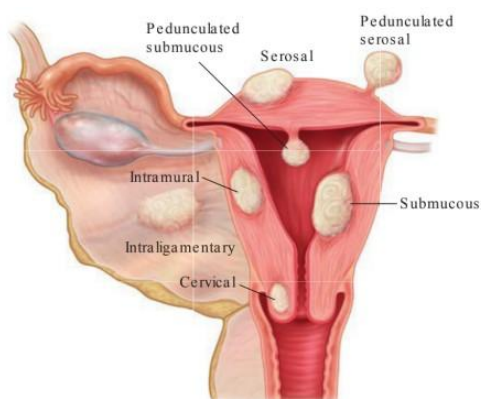
## 1. Introduction

Benign smooth muscle tumours called leiomyomas generally develop from the myometrium 1.

They are frequently referred to as fibroids or uterine myomas.

Although studies using histologic or sonographic evaluation have found rates as high as 70 to 80 percent, their occurrence among women is often reported to be between 20 and 25 percent.

Grossly, leiomyomas are round, rubbery tumors with a whorled pattern on cut section. They possess a thin, outer connective tissue layer which forms a crucial cleavage plane that makes it feasible to remove fibroids from the uterus.



**Figure 1:** Showing fibroids



**Figure 2:** Showing Intra mural fibroid

Leiomyoma is derived from a single progenitor myocyte. The cause is not known. The formation and incidence of these common tumours are thought to be influenced by a number of factors. The fibroid is recognised to be a mono - cellular illness (produced from a single cell) 2 and is hormone - dependent.

Estrogen and progesterone - sensitive cancers include uterine leiomyomas. They grow during the years of reproduction. Leiomyomas often diminish after menopause, and fresh leiomyoma formation is rare.

Leiomyoma has a lot of oestrogen receptors, which makes it easier for estradiol to attach to it and creates a

hyperestrogenic environment for it.

Early menarche, nulliparity, obesity, PCOS, and delayed menopause are typical risk factors.

Fibroids are typically diagnosed in 25–30% of females as asymptomatic 3, 4. It is one of the main causes of menorrhagia, metrorrhagia, and irregular vaginal bleeding, and it can result in infertility. and recurrent miscarriage.

Myomectomy is often selected compared to hysterectomy by those desiring organ preservation or childbearing or those wishing to avoid hysterectomy 6. Myomectomy is most commonly done by laparotomy. However, myomectomies are often done laparoscopy, hysteroscopy, vaginal myomectomy in case of prolapsed leiomyoma and cesarean myomectomy in fibroid complicating pregnancy.

**Objective**

To study the different modalities of surgical management of uterine fibroids, peri - operative and post - operative complications of various methods of myomectomy conducted and final outcomes in a tertiary care teaching hospital.

**2. Materials and Methodology**

A hospital based prospective study was conducted in department of obstetrics and gynaecology in tertiary care center from 1st April to 1st November 2022.

Structured questionnaires were used to collect data followed by clinical examination and intraoperative details after informed consent. Along with routine investigations surgical profile was performed in all patients.

**Criteria for our surgical management:** - Fibroids producing clinical symptoms

- Fibroids with lack of response to medical therapy
- Any evidence of compression symptoms on the surrounding organs
- Fibroid > 12 weeks size.

During laparotomy, size, location, number, situation, condition of tubes and ovaries and intra - operative blood loss was noted.

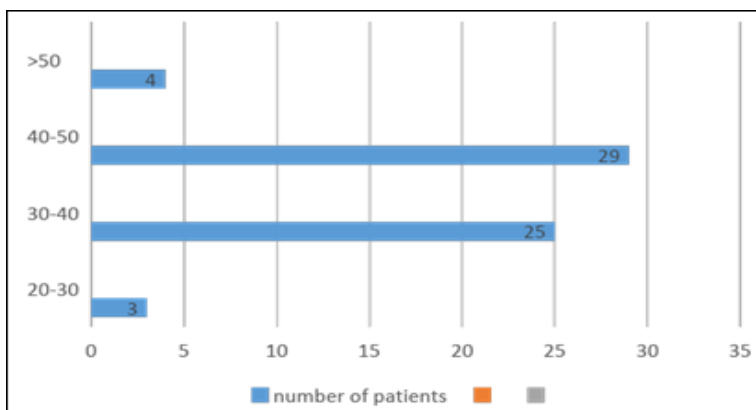
**Sample Size:** 62

**Inclusion criteria:** All patients who were admitted to our hospital during the study period with a diagnosis of benign leiomyoma and underwent surgical treatment there

**Exclusion standards:** cases that were determined to be cancerous

**3. Results**

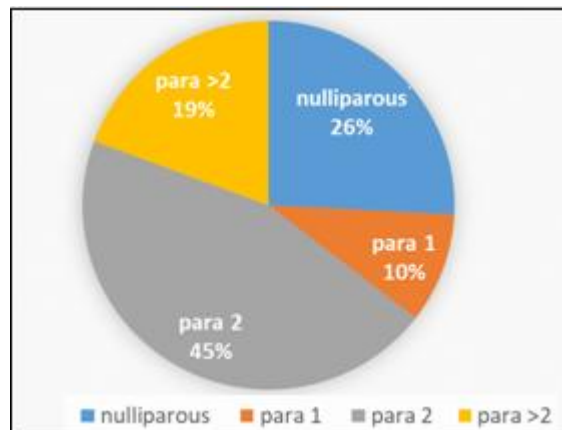
Out of 62 patients, various ages included in study. The age distribution of patients was 25 - 55 years with a mean age of 37 years.



**Table 1:** Age Distribution of Patients

**Parity of patients with fibroids:**

In our study 26 % patients are nulliparous 10 % of patients with parity 1 And 45 % with parity 2 and 19 % with parity > 2



**Figure 3:** Distribution of Parity among the Patients Studied

Study subjects most commonly presented with menstrual symptoms (menorrhagia, dysmenorrhea) 80%, urinary frequency 2%, abdominal mass 11% and infertility 2%.

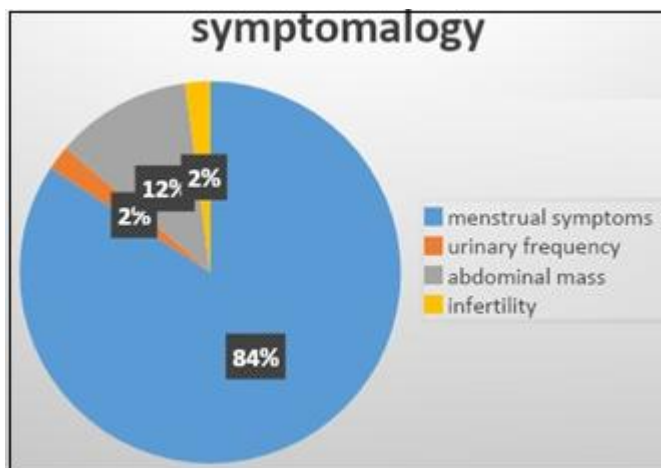


Figure 4: Distribution of Symptomatology of Patients

Table 2: Distribution of patients according to uterine size at presentation

Uterine size at presentation	No of patients
< 16 weeks	30
16 - 20 weeks	22
> 20 weeks	10

Out of 62 individuals, 30 patients had uteruses that were larger than 16 weeks, 22 had uteruses that were larger than 16 to 20 weeks, and 10 had uteruses that were larger than 20 weeks.

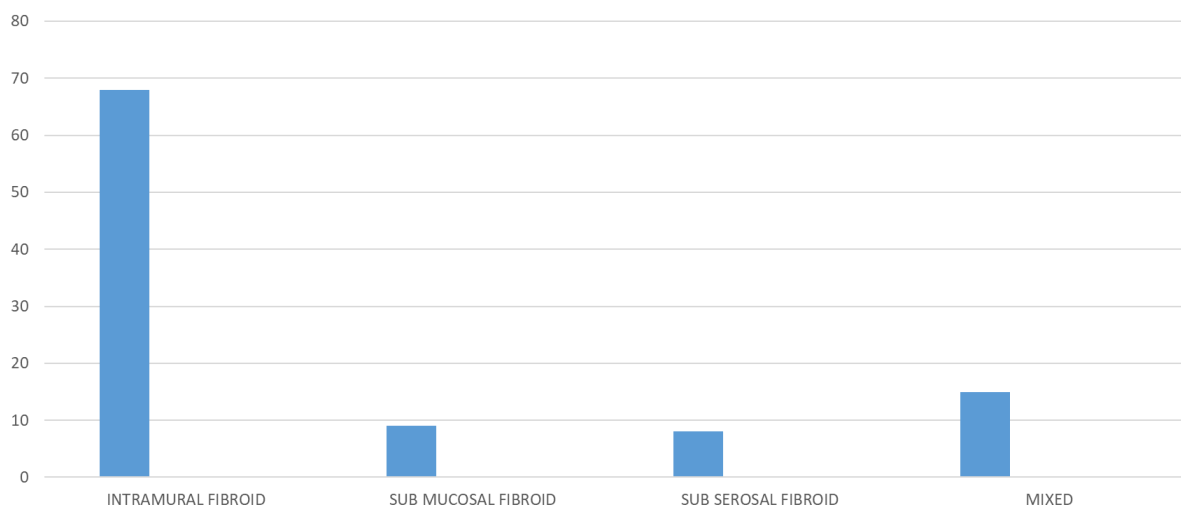


Table 3: Distribution of patients according to location of fibroids

Out of 62 patients 68% of patients have intamural fibroid, 9% patients of patients have sub mucosal fibroid, 8% sub serosal fibroid and 15 % patients have mixed fibroids.

Table 4: Distribution of unusual presentation of fibroid

Unusual presentation	No. of patients
Broad liagament fibroid	2
cervical fibroid	3
Fibroid polyp	3

Out of 62 patients who are operated 2 patients have broad ligament fibroid, 3 patients have cervical fibroids and 3 have fibroid polyp.

All these fibroids which are unusual presentation are mixed fibroids

In terms of treatment, 66% of patients underwent total abdominal hysterectomy, preferably with multiparity, and 30% of patients underwent myomectomy of which open myomectomy was done in 68%, laparoscopic myomectomy was done in 30%, hysteroscopic resection was done in 2%.2% cases include myomectomy during a cesarean

section.

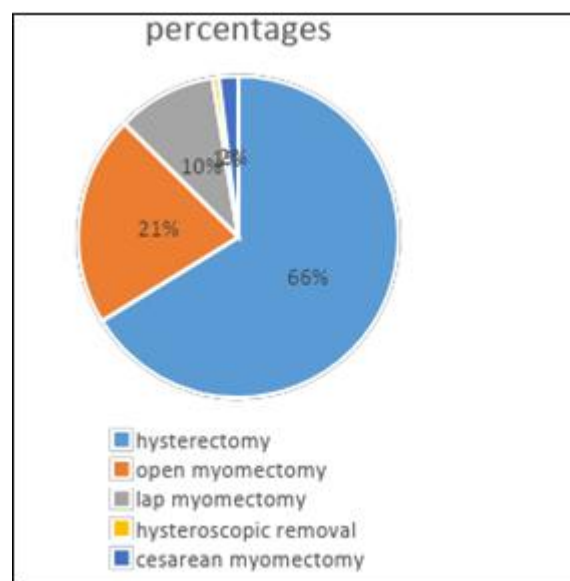
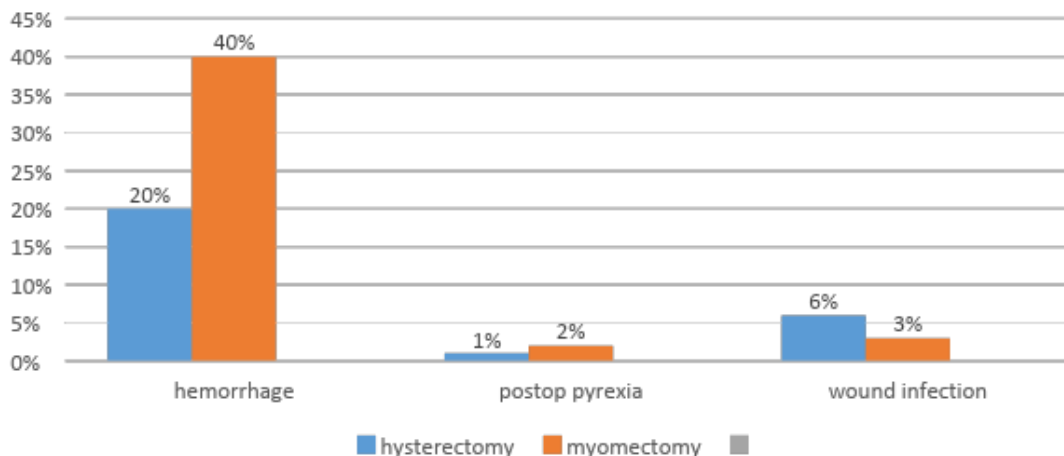


Figure 5: Distribution of Modalities of Surgeries

Complications include intraoperative blood loss (blood loss criteria > 500 ml) in around 20% of hysterectomies and in 10% of myomectomies. Post operative pyrexia was seen in 3% of myomectomies and in 1% of hysterectomies.

(Pyrexia was defined as a temperature greater than 37.5C in the first 72 hours). Wound infection was 6% and 4% in hysterectomies and myomectomies respectively.



**Table 5:** Distribution of patients according to their post op complications

#### 4. Discussion

The incidence of uterine fibroids was found to be 30 - 40% in females of age more than 40.

Women of ages between 25 and 55 are being considered for study of management. Our mean average age is 37 years.

The study by Madina Yamuna et al (2020) has shown the presence of menstrual symptoms (menorrhagia, dysmenorrhea) in 85%, urinary symptoms in 2%, presence of pelvic mass in 13% and infertility in 2%.

In our study, menstrual symptoms were predominant in 80% of cases while urinary symptoms, pelvic mass and infertility was present in 2%, 11% and 2% of cases respectively.

Our study is comparable to those by Ibrar, et al.<sup>7</sup> also found menorrhagia is the most common clinical symptom with leiomyoma.

About 68 % were intra mural fibroid which is the most common variety. Similar results were obtained by Chhabra, et al.<sup>8</sup> (47%) whereas Shaw<sup>9</sup> (73%) and Usha, et al.<sup>10</sup> (77%).

About 15% of the cases had multiple fibroids in our study. Incidence of cervical fibroids in our study is 4.8%, whereas in Ibrar, et al.<sup>7</sup> (3%), Shaw, et al.<sup>9</sup> [5] 4%, Bhaskar Reddy<sup>11</sup> 0.6%, Maitri, et al.<sup>12</sup> study is 6% which is very high compared to our study

The incidence of leiomyoma was the highest among the multiparous group in most of the studies 10, 12 Although the literature states that leiomyoma is a disease of low parity, this is probably due to early age at marriage and long gap between last child birth and development of symptoms 12.

The study by Muslina Akhter et al 13 (2015) reported that the percentages of operating fibroids by hysterectomy was 71% and by myomectomy was 24% of which open myomectomy was 50%, laparoscopic myomectomy was 36.2% and by other means was 14%.

In many prospective studies, there was an effort taken to reduce the frequency of abdominal hysterectomy, and conclude that all patients should be counselled in detail about the alternatives to hysterectomy so that they can share the decisions<sup>14</sup>

In our study, hysterectomy was done in 66% preferably in multiparous women, myomectomy was done in 32% (open myomectomy - 60%; lap myomectomy - 30%; hysteroscopic resection in 8%; cesarean myomectomy - 2%)

One of the significant factors in choosing the method of treating myoma is not only the skill of the surgeon, but also the experience of the centre in different available techniques.

Gynecologists need to improve their laparoscopic skills. Laparoscopic Myomectomy was associated with rapid recovery less blood and minimal postoperative pain, and fewer overall complications, but longer operating times, when compared with open myomectomy for patients with fibroids 15.

Study conducted by O Enabor and A Bello at university hospital, Ibadan, Nigeria stated the incidence of complications revealing 26% and 51% of hemorrhage, 1% and 3% of post - operative pyrexia and 6% and 4% of wound infection in hysterectomy and myomectomy for management of fibroids respectively.<sup>16, 17</sup>

In our study, hysterectomies and myomectomies revealed 20% and 40% of blood loss, 1% and 2% of post - operative pyrexia, 6% and 3% of wound infection respectively.



## 5. Conclusion

The most frequent benign tumour in women of reproductive age that affects fertility and general health is a fibrous uterus.

This study supports the idea that a significant proportion of patients require surgical surgery due to their diverse clinical presentations and frequent failures of conventional therapy.

Although hysterectomy is not the prime mode of management, it is observed to be the most common modality of treatment in multiparous woman and the definitive answer to prevent recurrence.

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