



CLINICAL EVALUATION AND SURGICAL MANAGEMENT OF UTERINE FIBROIDS- A RETROSPECTIVE STUDY

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ABSTRACT

INTRODUCTION: Uterine fibroids are a major cause of morbidity in women of reproductive age. Symptomatic fibroids are frequent encounters in gynecological practice. Therefore, it is important to evaluate their management especially surgical in order to practice, highlight complications, and facilitate care.

AIM AND OBJECTIVES: The aim of the study is to identify complications, the safety and feasibility of surgical management of uterine fibroids.

MATERIALS AND METHODS: All the patients who were diagnosed to have fibroid uterus who underwent surgical management at Great Eastern Medical School and Hospital were included in this study. Records of the patients between the time period of November 2020 to February 2021 were collected retrospectively. Primary outcomes studied were clinical presentation of uterine fibroids, sociodemographic factors, intraoperative hemorrhage, adhesions and blood loss requiring the transfusion.

RESULTS: Out of 50 patients who underwent total abdominal hysterectomy, 65% belongs to the age group of 41- 50 years and only 10% were above 50 years. Majority (50%) of the women had heavy menstrual bleeding, 25% had dysmenorrhea, 20% had lower abdominal pain and 5% were remained asymptomatic. Average duration for surgical procedure was 2 to 3 hours. 8% of women had intraoperative adhesions and 5% have postoperative wound infections.

CONCLUSION: Uterine fibroid is a common concern in women resulting in heavy bleeding and pain that can have a negative impact on different aspects of women's life. With early diagnosis and adopting proper selection criteria, surgical management of fibroid uterus is an effective and safe treatment.

KEYWORDS : Fibroids; Hysterectomy; Blood transfusion.

1. INTRODUCTION

Uterine fibroids (fibroids), or myomas (leiomyoma) are non-cancerous growths of the uterus, that often appear during the reproductive age of the women and sometimes even after the menopause.¹ They are abnormal growths that are made up of the muscle and connective tissue from the wall of the uterus. They are the common form of benign uterine tumors with a incidence of 60% by the age of 35 years, reaching up to 80% by the age of 50 years in African American women. In Caucasian women, it showed an incidence of 40% by age of 35 years, and almost 70% by 50 years.²

In majority of the women, the fibroid tumors are asymptomatic in nature (30%- 40%), left undiagnosed, and are diagnosed incidentally on clinical examination or imaging. However, in symptomatic women, they can cause significant morbidity due to abnormal uterine bleeding, pelvic pressure/ pain resulting in bulk symptoms, iron deficiency anemia, and infertility or obstetric complications.^{3, 4} They also have a considerable impact on the women's quality of life, the women with severe symptoms had a negative impact on sexual life, decreased performance at work, and negative impact on the relationship, and family.⁵⁻⁷

These tumors are originated from the myometrium, which is the uterine smooth muscle tissue. Even though their cause is still unknown, there was considerable evidence suggesting that their growth is dependent on estrogen and progesterone.⁸ These ovarian hormones are hypothesized to enhance the growth of the fibroids, which can be confirmed by their rare appearance before menarche⁹ and regress in size after menopause.¹⁰

The majority of uterine leiomyomas are asymptomatic and will not require therapy. Even though enlarging fibroids is a common happening, their removal is not generally indicated if asymptomatic, which is due to their natural course that involves growth and regression. Their treatment must be individualized, based on the symptoms, the size and location of the fibroids, age of the patient, the patient needs and

desires, access to the treatment and the physician's experience.¹¹ The ideal treatment for fibroids should satisfies four goals that includes the relief of signs and symptoms, sustained reduction of the size of fibroids, maintenance of fertility (if desired), and avoidance of harm.

Surgical interventions like hysterectomy remains a viable option and definitive cure for women with symptomatic fibroids, especially for those who do not wish to preserve fertility. On the other hand, myomectomy (hysteroscopic myomectomy) is the preferred surgical procedure for women with submucosal fibroids who wish to preserve their fertility.⁸

Symptomatic uterine leiomyomas are frequently encountered in gynecology, therefore, there is a need to evaluate their surgical management in order to audit practice and identify areas that require further research and clinical trials. This study aimed to identify complications, the safety and feasibility of surgical management of uterine fibroids.

2. MATERIALS & METHODS

This was a retrospective observational study of hospital records over a 3- month period (November 2020 to February 2021) at a hospital in located in south- India. All the Patients who were diagnosed to have fibroid uterus who underwent total Abdominal hysterectomy during this period of 3 months were included. Patients of all age groups diagnosed with uterine fibroid either clinically or radiologically (incidentally) that required surgical management were also included. Fibroids without histological evidence of leiomyomata and cases that included evidence of malignancy were excluded. Fibroids complicating pregnancy, that can be managed medically and do not require surgical management were also excluded. With these criteria, a total of 50 cases were collected retrospectively forming the study population.

The following information was collected i.e., detailed history, clinical examination findings, transabdominal ultrasonographic examination, detailed surgical notes, postoperative follow up

details till discharge of the patient and the histopathological reports. The Primary outcomes studied were clinical presentation of uterine fibroids, socio demographic factors, significant intraoperative haemorrhage, adhesions & blood loss requiring the need for intraoperative/ postoperative transfusion. Secondary outcomes studied were duration of the surgery and the post-operative complications. Descriptive statistics were performed.

Table 1: Age wise distribution of the study population

Age group	Number (%)
30- 40 years	13 (50)
41- 50 years	33 (65)
≥50 years	4 (10)
Total	50 (100)

Table 2: Sites of Fibroid location

Location	Number (%)
Subserous	10 (20)
Intramural	40 (80)
Submucous	0 (0)
Pedunculated	0 (0)
Total	50 (100)

Table 3: Symptoms observed

Symptoms	Number (%)
Menorrhagia	25 (50)
Dysmenorrhea	12 (24)
Lower abdominal pain/ fullness	10 (20)
Asymptomatic	3 (6)
Total	50 (100)

Table 4: Average duration of the surgery

Duration	Number (%)
< 2 hours	25 (50)
2- 3 hours	18 (36)
3- 4 hours	7 (14)
Total	50 (100)

Table 5: Intraoperative complications among the study population

Complications	Number (%)
Nil	32 (64)
Hemorrhage	5 (10)
Adhesions	10 (20)
Adnexal injury	3 (6)
Total	50 (100)

Table 6: Number of patients required blood transfusion

Complications	Number (%)
Nil	10 (20)
Preoperative	25 (50)
Intraoperative	5 (10)
Postoperative	10 (20)
Total	50 (100)

Table 7: Post-operative complications

Complications	Number (%)
Pyrexia	2 (4)
Wound infections	5 (10)
Wound gaping	2 (4)
Nil	43 (86)
Total	50 (100)

3. RESULTS

The mean age of the study population was 43.5 ± 4.8 years (range: 30 to 62 years), majority of the sample (65%) belonging to the age group of 41 to 50 years, 25% belongs to 30 to 40 years age group and the remaining sample (10%) of above 50 years age (Table 1). Table 2 shows the sites of fibroid tumors in patients. It was observed that 80% of tumors were located intramurally, while the remaining 20% were subserous in

location. Table 3 displays the symptoms of the study population. 6% of the patients were asymptomatic, 50% of them showed menorrhagia, 24% exhibited dysmenorrhea, 20% complained about lower abdominal pain or fullness.

Table 4 shows the average amount of time taken for the surgery for the removal of the fibroid tumors. In 50% of the patients, surgery was performed less than 2 hours, 2 to 3 hours in 36% cases and 3 to 4 hours in 14% of the cases respectively. Table 5 displays the intraoperative complications. No complications were seen in 64% cases, hemorrhage was seen in 10% individuals, adhesions were seen in 20% cases and adnexal injury was seen in 6% of the subjects, respectively. Table 6 highlighted the number of patients who were required blood transfusion at different time intervals. Preoperative blood transfusion was done in 50% of the patients, intraoperative transfusion was done in 10% of the sample, while postoperative transfusion was done in 20% of the cases respectively. Table 7 displays the postoperative complications. No complications were seen in majority of the sample (86%). Pyrexia was seen in 4% sample, wound infections in 10% subjects while wound gaping was seen in 4% subjects respectively.

4. DISCUSSION

The present study aimed to determine the prevalence of complications following surgical management of fibroid hysterectomy. In the present study, uterine fibroids occurred more in the 4th decade of life i.e., between 41 and 50 years. These findings were similar to the studies in the literature.¹²⁻¹⁴ A detailed information from the patients studied showed that women with a diagnosis of uterine fibroids reported more frequently about heavy and prolonged bleedings. Moreover, they have reported unpredictable and irregular bleedings i.e., described as bleedings between periods. These findings are consistent with the previous studies.^{5, 15, 16} The possible explanation for the heavy or prolonged menstrual flow is the increased surface area of the endometrium, distortion and congestion of surrounding vessels, abnormal endometrial development, increase in blood flow to the uterus, and poor uterine contractility.¹⁷

Literature findings suggested that apart from bleeding symptoms, women with uterine fibroid tumors suffer more frequently from gynecological pain. In the present study, 24% of the women have reported dysmenorrhea i.e., painful menstruation, typically involving abdominal cramps. 20% of the patients experienced lower abdominal pain, and it could be due to the large size of the tumor causing pressure effects. Sometimes, the abdominal pain is due to the complicated fibroids.

According to the literature, majority of the uterine fibroids are seen in multiple locations. In the present study, the most common site was intramural (80%) followed by subserous (20%). No submucous fibroids were seen. This trend of the location is similar to the Akinyemi et al.¹⁷ who reported the location frequencies as 70%, 20%, and 10% for intramural, subserous, and submucous, respectively.

The commonest postoperative complication in this retrospective study was wound infections (10%), followed by postoperative pyrexia (4%) and wound gaping (4%). No complications were seen in majority (86%) of the cases. Pyrexia occurring longer than 24 hours after surgery has been thought to be due to hematoma formation within the cavities created during the surgery. Ezeama et al.¹⁸ has recommended for the use of newer techniques like uterine artery embolization that could reduce the occurrence of fever.

In the present study, in cases with larger fibroids like broad ligament fibroids, assistance of an urologist was taken during the surgery due to the distorted anatomy of the ureter. Longer operating time was seen in women with dense adhesions. Also, in women with associated conditions like benign ovarian tumors, adnexal injuries due to large size of the fibroids/ adhesions, longer operative time was observed.

Pre-treatment with medical therapy before the surgical procedure (hysterectomy) is useful for women especially for those with severe anemia and to reduce further blood loss during surgery.¹⁸ In the present study, preoperative blood transfusion was done in 50% of cases due to the presence of larger fibroids in some while other women were anemic. In 10% of cases, intraoperative blood transfusion was done due to the adhesions of the fibroids to the endometrium. Postoperative blood transfusion was done in 20% of women. It was performed in the subjects whose postoperative haemoglobin levels were not improved following surgery.

There are few limitations to the present study. They include the retrospective nature of the study, duration of the study which is limited only to 3 months. This is mainly due to the covid pandemic that resulted in smaller sample size. Only total abdominal hysterectomy cases were included. Further studies are warranted in a larger sample size and use of multicentre database, that allows generalization of the findings to most hospital settings are needed.

5. CONCLUSION

The study results are consistent with the literature indicating that uterine fibroids are a common concern for women in fertile age, especially in the age group of above 40 years. They became a common concern in women resulting in heavy bleeding and pain that can have a negative impact on different aspects of women's life. With early diagnosis and adopting proper selection criteria, surgical management of fibroid uterus is an effective and safe treatment.

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