



CLINICAL PROFILE AND MANAGEMENT OUTCOME OF WOMEN WITH FIBROID UTERUS AT A TERTIARY CARE HOSPITAL IN RAJASTHAN.

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ABSTRACT

Background: Uterine fibroids (leiomyomas) are the most common benign tumours of the female reproductive tract and a leading cause of gynaecological morbidity. They commonly affect women in the reproductive and perimenopausal age groups and present with varied clinical manifestations. Understanding the clinical profile and management outcomes is essential for improving patient care, particularly in tertiary care settings.

Objectives: To study the clinical profile and management outcomes of women diagnosed with fibroid uterus attending a tertiary care hospital in Rajasthan.

Methods: This hospital-based prospective observational study was conducted over a period of twelve months from April 2022 to March 2023 in the Department of Obstetrics and Gynaecology of a tertiary care teaching hospital in Rajasthan. A total of 138 women aged 20–55 years, diagnosed with uterine fibroid based on clinical examination and ultrasonography, were included using consecutive sampling. Data were collected using a pre-designed, semi-structured proforma covering socio-demographic details, clinical presentation, ultrasonographic findings, management modalities, and outcomes. Data were analysed using SPSS version 26. Descriptive statistics were used, and associations were assessed using the Chi-square test, with $p < 0.05$ considered statistically significant.

Results: The majority of women belonged to the 40–49 years age group (42.0%) and were multiparous (61.6%). Menorrhagia was the most common presenting complaint (53.6%). Intramural fibroids were the most frequently detected type (51.4%), and 33.3% of women had multiple fibroids. Medical management was provided to 30.4% of women, myomectomy to 24.6%, and hysterectomy to 44.9%. Surgical management was significantly more common among women aged ≥ 40 years ($p < 0.001$). Most women (88.4%) experienced significant symptomatic improvement, with a low postoperative complication rate.

Conclusion: Fibroid uterus is a common gynaecological condition with varied clinical presentation. Individualized management based on age, symptoms, and reproductive plans results in favourable outcomes, particularly in tertiary care settings.

Keywords: Fibroid uterus; Leiomyoma; Menorrhagia; Hysterectomy; Myomectomy; Ultrasonography; Tertiary care hospital

INTRODUCTION

Uterine fibroids, also known as leiomyomas, are the most common benign tumours of the female reproductive tract and represent a major cause of gynaecological morbidity worldwide. They are composed of smooth muscle cells and fibrous connective tissue arising from the myometrium and vary in size, number, and location within the uterus [1]. Although fibroids are often asymptomatic, a significant proportion of affected women present with symptoms that adversely impact quality of life and reproductive health.

The global prevalence of uterine fibroids among women of reproductive age ranges from 20% to 40%, with higher prevalence reported in women aged 30–50 years [2]. In India, fibroid uterus constitutes one of the leading indications for gynaecological consultations, hospital admissions, and surgical interventions such as hysterectomy and myomectomy [3]. The true prevalence is likely underestimated, as many women remain asymptomatic or undiagnosed.

The clinical presentation of fibroid uterus is highly variable and depends on factors such as size, number, and location of fibroids. Common symptoms include abnormal uterine bleeding, dysmenorrhea, pelvic pain, pressure symptoms affecting the bladder or bowel, infertility, and recurrent pregnancy loss [4]. Among these, abnormal uterine bleeding—particularly menorrhagia—is the most frequently reported symptom and is a major contributor to anemia in women of reproductive age [5].

Uterine fibroids are estrogen- and progesterone-dependent tumours, and their growth is influenced by hormonal, genetic, and environmental factors. Increasing age, nulliparity, early menarche, obesity, and family history are well-recognized risk factors [6]. Fibroids tend to regress after menopause due to declining ovarian hormone levels, supporting the role of hormonal influence in their pathogenesis. Diagnosis of fibroid uterus is primarily clinical, supported by imaging modalities. Pelvic ultrasonography is the first-line investigation and remains the most widely used diagnostic tool due to its availability, affordability, and non-invasive nature [7]. Magnetic resonance imaging is reserved for selected cases where detailed mapping is required or when malignancy is suspected.

Management of uterine fibroids depends on the severity of symptoms, size and location of fibroids, age of the patient, desire for future fertility, and available healthcare resources. Treatment options range from expectant management and medical therapy to minimally invasive procedures and surgical interventions [8]. Medical management includes the use of non-steroidal anti-inflammatory drugs, tranexamic acid, hormonal therapies, and gonadotropin-releasing hormone analogues. While medical therapy is effective in symptom control, it is often temporary and associated with recurrence after discontinuation [9].

Surgical management remains the definitive treatment for symptomatic fibroid uterus. Myomectomy is preferred in women who desire future fertility, whereas hysterectomy is considered the treatment of choice for women who have completed childbearing and have severe or recurrent symptoms [10]. Advances in minimally invasive surgery have led to increased use of laparoscopic and hysteroscopic techniques, resulting in reduced morbidity and shorter hospital stay.

In India, hysterectomy for fibroid uterus continues to be common, particularly in tertiary care centres that cater to a large number of referrals with advanced disease and failed medical management [11]. However, the choice of management is often influenced by socio-economic factors, patient awareness, availability of expertise, and institutional facilities.

Rajasthan, with its diverse population and varying access to healthcare services, presents unique challenges in the management of gynaecological disorders. Women often present late due to lack of awareness, social barriers, and limited access to specialist care, resulting in increased symptom severity and higher likelihood of surgical intervention [12]. Anemia secondary to chronic menstrual blood loss remains a frequent complication among women with fibroid uterus in this region.

Tertiary care hospitals serve as referral centres for complicated and symptomatic cases of fibroid uterus and provide comprehensive diagnostic and therapeutic services. Hospital-based studies

conducted in such settings are valuable for understanding the clinical profile, management practices, and outcomes of women with fibroid uterus [13]. Analysis of management outcomes helps in evaluating the effectiveness of various treatment modalities and guiding evidence-based clinical decision-making.

Despite the high burden of fibroid uterus, there is limited recent literature from tertiary care centres in Rajasthan that comprehensively evaluates both the clinical profile and management outcomes of affected women. Understanding local patterns of presentation and treatment outcomes is essential for optimizing patient care and resource utilization.

Therefore, the present study was conducted over a period of twelve months from April 2022 to March 2023 at a tertiary care hospital in Rajasthan to evaluate the clinical profile and management outcomes of women diagnosed with fibroid uterus. The study aims to assess demographic characteristics, clinical presentation, diagnostic findings, treatment modalities, and outcomes, thereby contributing to improved management strategies for women with fibroid uterus.

ATERIALS AND METHODS

Study Design: This was a hospital-based prospective observational study.

Study Setting: The study was conducted in the Department of Obstetrics and Gynaecology at a tertiary care teaching hospital in Rajasthan, India.

Study Period: The study was carried out over a period of twelve months, from April 2022 to March 2023.

Study Population: The study population comprised women diagnosed with uterine fibroid (leiomyoma) attending the gynaecology outpatient department or admitted to the gynaecology ward during the study period

Inclusion Criteria

- Women aged 20–55 years
- Women diagnosed with uterine fibroid based on clinical examination and ultrasonography
- Women willing to participate and providing written informed consent

Exclusion Criteria

- Pregnant women
- Women with suspected or confirmed malignancy of the uterus
- Women with adnexal masses other than fibroids
- Women unwilling to participate in the study

Sample Size Calculation: The sample size was calculated using the standard formula for estimating a proportion in a cross-sectional study. Assuming a prevalence of uterine fibroid of 10% based on previous Indian studies, with a 95% confidence level and an allowable error of 5%, the calculated sample size was 138 women, which was taken as the final sample size for the study.

Sampling Technique: Participants were selected using consecutive sampling, and all eligible women fulfilling the inclusion criteria were enrolled until the required sample size was achieved.

Data Collection Tools: Data were collected using a pre-designed, pre-tested, semi-structured proforma, which included:

- Socio-demographic details: age, residence, parity
- Clinical profile: presenting complaints, duration of symptoms, menstrual pattern
- Examination findings: uterine size, tenderness, mobility
- Ultrasonography findings: number, size, and location of fibroids
- Management details: medical management, surgical intervention (myomectomy/hysterectomy), route of surgery

- Outcome measures: symptom relief, perioperative complications, hospital stay

Data Collection Procedure: Eligible women were enrolled after obtaining written informed consent. Detailed clinical history and examination findings were recorded. Ultrasonography findings were noted from reports. Management decisions were made as per standard institutional protocols, and outcomes were assessed during hospital stay and follow-up where applicable.

Operational Definitions

- Fibroid uterus: Presence of one or more leiomyomas diagnosed on ultrasonography.
- Medical management: Treatment with hormonal or non-hormonal medications for symptom control.
- Surgical management: Myomectomy or hysterectomy performed for symptomatic fibroid uterus.

Ethical Considerations: Confidentiality of patient information was maintained, and participation was voluntary.

Statistical Analysis: Data were entered into Microsoft Excel and analysed using Statistical Package for the Social Sciences (SPSS) version 26. Continuous variables were expressed as mean $\pm$ standard deviation, and categorical variables as frequencies and percentages. The Chi-square test was used to assess associations between categorical variables. A p value < 0.05 was considered statistically significant.

RESULTS

A total of 138 women diagnosed with uterine fibroid were included in the study during the 12-month study period. The clinical profile, ultrasonographic characteristics, management modalities, and outcomes were analysed. Fibroid uterus was most commonly observed in the 40–49 years age group, indicating higher prevalence in the late reproductive and perimenopausal period. Table 1 shows the age-wise distribution of women with fibroid uterus.

Age group (years)	Frequency	Percentage (%)
20–29	18	13.0
30–39	46	33.3
40–49	58	42.0
≥ 50	16	11.7

The majority of women were multiparous, suggesting higher detection and symptomatology of fibroids after completion of family size. Table 2 shows the parity-wise distribution of study participants.

Parity	Frequency	Percentage (%)
Nulliparous	22	15.9
Para 1	31	22.5
Para ≥ 2	85	61.6

Menorrhagia was the most common presenting symptom, highlighting excessive menstrual bleeding as the predominant complaint in women with fibroid uterus.

Table 3: Clinical Presentation of Women with Fibroid Uterus (n = 138*)		
Presenting symptom	Frequency	Percentage (%)
Menorrhagia	74	53.6
Dysmenorrhea	42	30.4
Pelvic pain	36	26.1
Pressure symptoms	29	21.0
Infertility	19	13.8

*Multiple responses allowed

Intramural fibroids were the most common type, and a significant proportion had large or multiple fibroids, contributing to symptom severity. Table 4 shows the ultrasonographic characteristics of fibroids.

Table 4: Ultrasonographic Characteristics of Fibroids (n = 138)		
USG finding	Frequency	Percentage (%)
Intramural fibroid	71	51.4
Subserosal fibroid	38	27.5
Submucosal fibroid	19	13.8
Multiple fibroids	46	33.3
Fibroid ≥ 5 cm	58	42.0

Nearly 45% of women underwent hysterectomy, reflecting late presentation, completed family size, and severity of symptoms in a tertiary care setting. Table 5 shows the management modalities adopted in fibroid uterus.

Table 5: Management Modalities Adopted in Fibroid Uterus (n = 138)		
Management modality	Frequency	Percentage (%)
Medical management	42	30.4
Myomectomy	34	24.6
Hysterectomy	62	44.9

Surgical management was significantly more common in women aged ≥ 40 years. The association between age and surgical intervention was statistically significant ($p < 0.001$). Table 6 shows the association between age group and surgical management.

Table 6: Association Between Age Group and Surgical Management (n = 138)				
Age group	Surgical management n (%)	Conservative/Medical n (%)	χ^2 value	p value
<40 years (n=64)	31 (48.4)	33 (51.6)	18.42	<0.001
≥ 40 years (n=74)	65 (87.8)	9 (12.2)		

The majority of women experienced significant symptomatic improvement, with a low complication rate, indicating effective management outcomes in the tertiary care setting. Table 7 shows the outcome of management among study participants.

Table 7: Outcome of Management Among Study Participants (n = 138)

Outcome parameter	Frequency	Percentage (%)
Symptomatic improvement	122	88.4
Postoperative complications	11	8.0
Prolonged hospital stay (>7 days)	9	6.5

DISCUSSION

The present study evaluated the clinical profile and management outcomes of women diagnosed with fibroid uterus at a tertiary care hospital in Rajasthan over a 12-month period. Uterine fibroids remain one of the most common benign gynaecological conditions encountered in clinical practice and continue to be a leading cause of hospital admission and surgical intervention.

In the present study, fibroid uterus was most commonly observed in women aged 40–49 years. Similar age distribution has been reported in studies by Jain et al. (2023) and Nath et al. (2021), where the majority of cases were detected in the late reproductive and perimenopausal age group [14,15]. The increased prevalence in this age group can be attributed to prolonged estrogen exposure and delayed healthcare-seeking behavior, leading to increased symptom severity and diagnosis at a later stage.

Parity-wise analysis showed that most women were multiparous. This finding is consistent with studies by Khan et al. (2014) and Sinha et al. (2023), which reported a higher incidence of symptomatic fibroids among multiparous women, particularly those who had completed their family [16,17]. Multiparity may contribute indirectly through cumulative hormonal exposure and delayed presentation for treatment.

Menorrhagia was the most common presenting complaint in the present study, followed by dysmenorrhea and pelvic pain. Similar symptom patterns have been documented by Gupta et al. (2008) and Bano et al. (2021), who reported abnormal uterine bleeding as the predominant symptom among women with fibroid uterus [18,19]. Chronic heavy menstrual bleeding often leads to anemia, which remains a major contributor to morbidity in fibroid patients.

Ultrasonographic evaluation revealed that intramural fibroids were the most common type, followed by subserosal and submucosal fibroids. These findings are comparable to observations made by Dueholm et al. (2002) and Stewart et al. (2006), who reported intramural fibroids as the most frequently encountered type in hospital-based studies [7,20]. Larger and multiple fibroids were more likely to be associated with severe symptoms and need for surgical intervention.

Regarding management, hysterectomy was the most commonly performed procedure in the present study, particularly among women aged 40 years and above. Similar trends have been reported by Desai S et al. (2019) and Jain et al. (2023), highlighting hysterectomy as the preferred definitive treatment in women who have completed childbearing [11,14]. Late presentation, large fibroid size, and persistent symptoms despite medical therapy often necessitate surgical management in tertiary care settings.

Myomectomy was performed in women desiring future fertility or uterine preservation. Studies by Donnez and Dolmans (2016) and Sami et al. (2011) have emphasized the role of myomectomy in selected patients, particularly younger women and those with infertility [8,21]. Medical management was mainly used for symptom control or as a preoperative measure, though recurrence remains a limitation of conservative treatment.

A statistically significant association was observed between increasing age and surgical management in the present study. Similar associations have been reported by Nath et al. (2021) and Bano et al. (2021), indicating that advancing age is a strong determinant for opting definitive surgical treatment [15,19]. This highlights the importance of early diagnosis and counselling regarding treatment options.

Overall, the majority of women experienced significant symptomatic improvement following management, with a low complication rate. Comparable outcomes have been reported in tertiary care

studies by Sinha et al. (2023) and Stewart et al. (2006), demonstrating that timely and appropriate management of fibroid uterus leads to favourable clinical outcomes [17,20].

The findings of the present study reinforce that fibroid uterus remains a major contributor to gynaecological morbidity. Early detection, individualized management based on age and reproductive desires, and patient-centred counselling are essential to optimize outcomes. Tertiary care centres play a crucial role in managing advanced and complicated cases, particularly in resource-limited settings like Rajasthan.

CONCLUSION

The present study highlights uterine fibroid as a major cause of gynaecological morbidity among women attending a tertiary care hospital in Rajasthan. Fibroid uterus was most commonly observed in women in the late reproductive and perimenopausal age group, with multiparity being a frequent associated factor. Menorrhagia emerged as the predominant presenting symptom, often contributing to anemia and reduced quality of life. Intramural fibroids were the most commonly detected type on ultrasonography. Nearly half of the women required hysterectomy, reflecting late presentation, completed family size, and severity of symptoms, while myomectomy and medical management were employed in selected cases. Surgical management was significantly more common among women aged 40 years and above. Overall management outcomes were favourable, with a high proportion of women experiencing symptomatic improvement and a low complication rate. Early detection, appropriate counselling, and individualized management based on age, symptom severity, and reproductive desires are essential to optimize outcomes in women with fibroid uterus.

Declarations

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