

Retrograde Observational Study of Uterine Fibroids**Saumya Majmundar¹, Deepti Vaghamshi², Shivangini Mehta³, Bhatt Ridhhi⁴, Anjali Changulani⁵**¹Senior Resident, Department of Obstetrics and Gynaecology, GMERS Medical College, Sola, Ahmedabad, Gujarat, India²Junior Resident, Department of Obstetrics and Gynaecology, GMERS Medical College, Sola, Ahmedabad, Gujarat, India³First Year Resident, Department of Obstetrics and Gynaecology, GMERS Medical College, Sola, Ahmedabad, Gujarat, India⁴Senior Resident, Department of Obstetrics and Gynaecology, GMERS Medical College, Sola, Ahmedabad, Gujarat, India⁵Junior Resident, Department of Obstetrics and Gynaecology, GMERS Medical College, Sola, Ahmedabad, Gujarat, India

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Conflict of interest: Nil

Abstract:

Introduction: Uterine fibroids (myomas or leiomyomas) are benign monoclonal tumours of smooth muscle, taking origin in myometrium of human uterus. The aetiology is largely unknown, but they are estrogen and progesterone dependent tumours. It is estimated that 60% of reproductive age women are affected and 80% of women develop the disease during their lifetime. Symptoms depend upon size, number, and location of the tumours. The large number of women are also asymptomatic.

Material and Methods: This prospective observational study included 118 randomly selected patients of fibroids uterus, during the study period at the department of Obstetrics and Gynecology, in our teaching institute. Patients of all ages and parity who visited either the gynecology outpatient or inpatient department of our institution were eligible for inclusion in the study, provided they were willing to participate. Exclusion criteria encompassed individuals in the antepartum or postpartum period with fibroids, as well as those who declined participation. Cases were examined following a predetermined format.

Results: Majority of women (82.1%) were of age group 31-50 years. Abnormal uterine bleeding (64.4%) was the most common symptom followed by abdominal pain (22.28%), reproduction related problems (16.94%), mass in abdomen (14.4%), vaginal discharge (12.7%), also asymptomatic (8.47%). Anatomically uterine fibroids were intramural (63.86%), sub serous (13.44%) and sub muocus (10.08%) in location. Expectant management in (8.4%) medical management in (38.98%) and surgical management (52.5%) was offered.

Conclusion: Globally uterine fibroids are among the most significant disease of the reproductive age women. Menstrual dysfunction is the common presenting symptoms in majority of the patients. Fibroids are an infrequent cause of subfertility and have been reported as the sole causes in only a small percentage of patients. It may remain silent in many cases Small and asymptomatic fibroids can be managed with expectant management. Medical management aims at decreasing blood loss, minimizing vascularity and size of fibroid. Large and symptomatic fibroids need surgical management.

Keyword: Fibroid, intramural, subserosal, submucosal.

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Introduction

Uterine fibroids (myomas or leiomyomas) are benign monoclonal tumours of smooth muscle, taking origin in myometrium of human uterus [1]. The aetiology is largely unknown, but they are estrogen and progesterone dependent tumours. It is estimated that 60% of reproductive age women are affected and 80% of women develop the disease during their lifetime. Symptoms depend upon size, number and location of the tumours. The large numbers of

women are also asymptomatic [2]. According to different locations and types of uterine fibroids can be manifested as menstrual abnormalities, lower abdominal pain, pressure symptoms, infertility, and other clinical symptoms. Uterine fibroids place a large economic burden on the women who suffer from it and on the health systems and society in which they live. Treatment of uterine fibroids depends on size, number and extent of fibroids and on

the patient’s wishes with regards to fertility. It varies from expectant management to the major surgery. Treatment options differ in fundamental aspects such as cost, invasiveness, recovery time, risks, likelihood of long-term resolution of symptoms, need for future childbearing etc. Surgical interventions like myomectomy and hysterectomy have been common treatment modalities for women with symptomatic uterine fibroids. However options of newer pharmacological molecules [3] and numbers of minimally invasive alternative treatments for symptomatic fibroids are available which include Uterine artery embolization (UAE) [4], Magnetic resonance imaging- guided focused ultrasound therapy(MRGUs) [5,6], LNG-IUD, Laparoscopic cryoablation [7,8], Radio thermal ablation [9]. All these modern-day management options had provided more fruitful outcome and acceptance.

Material and Methodology

The primary aim of this study is to investigate demographic variables among patients with uterine fibroids. Additionally, the study aims to examine the various types and locations of uterine fibroids, explore the spectrum of clinical manifestations

associated with uterine fibroids, and evaluate the different management approaches employed for uterine fibroids and their respective outcomes.

This prospective observational study enrolled 118 randomly selected patients diagnosed with uterine fibroids during the period spanning from July 15, 2023 to January 2024, at the Obstetrics and Gynecology department of our teaching institution.

Case Selection Criteria: Inclusion criteria for patient selection included individuals of all ages and parity who presented to the gynecology outpatient or inpatient department of our institution and expressed willingness to participate in the study.

Exclusion criteria comprised patients in the antepartum or postpartum period with fibroids, as well as those who declined participation.

Data Collection and Analysis: Data collection involved the systematic documentation, tabulation, and analysis of relevant information using a standardized format.

Subsequent analysis was carried out according to predetermined parameters.

Result and Discussion:

Table 1: Age distribution in present series

Age group (years)	Present study N= 118 (%)	Pinto Rosario [10] %	Gowri [11] %	Kyade RL et al [12] %
<20	00 (%)	00%		
21-30	09 (7.8 %)	07.5%	04.6%	
31-40	51 (43.2 %)	44.7%	41.3%	24%
41-50	46 (38.9 %)	41.3%	49%	68%
>50	12 (10.1 %)	04.6%	05.1%	06%

In present study, fibroids are common in age group of 31-40 years (43.2%), Prevalence of fibroids ranges between (3.3to77%) in population, and vary with age and ethnicity. Similar findings are observed in studies conducted by Pinto Rosario et al (1968), Gowri et al ((2013), and Khyade RL et al (2017) [10-12]. Bonney believed that tumors arise before the age of 30 years and become clinically obvious at any age [13].

Tables 2: Parity and fibroids

Parity	Present study N (%)	Gowri [11] %	Maitri et al [14] %	Munusamy MM et al [15] %
Nullipara	05 (4.2%)	02.5%	06%	28.75%
Primipara	28 (23.7%)	15.4%	15%	22.25%
Multipara	85 (72%)	35%	79%	50%

In present study, majority of women 85(72%) were multiparous. fibroids grow under the influence of the hormone estrogen and are most often seen after the menarche, and tend to shrink after the menopause, which coincides with the studies conducted by Gowri et al(2013), Maitri et al(2016), and Munusamy MM et al(2017) [11,14,15].The inci-

dence of fibroid in present study is in nullipara(4.2%) and primi para(23.7%), Munusamy MM et al(2017) [15], reported very high incidence (28.75%) of fibroid in nulliparous women[16], Gowri et al (2013)and Maitri et al (2016) found less incidence in nullipara-2.5% and 6% respectively [11,14].

Table 3: Anatomical Locations of Fibroids

Anatomical site	Present study N %	Jalandhar [17] (%)	Lahori M et al., [18] %
Intramural	76 (64.40%)	60%	57.43%
Sub mucous	12 (10.08%)	04%	9.1%
Sub serous	16 (13.55%)	20%	30.69%
Multiple (included cervical)	14 (11.86%)	-	15.10%

In present study Intramural (64.40%) fibroid was

most seen. The intramural fibroid is the most

prevalent of all the leiomyoma, and can go undetected if they do not produce noticeable symptoms. The common symptoms of fundal, posterior, and anterior intramural fibroids are pelvic pain, lower back pain, heavy periods, or bleeding in between periods. There is a general agreement that submu-

cosal fibroids negatively affect fertility, when compared to women without fibroids. In study conducted by Jalandhar et al (2016) and Lahori M et al (2016) most common location of fibroids was intramural (57.43%) followed by sub serosal (30.69%) [17,18].

Tables 4: Management in presenting series

Management	Present study N-118 (%)	Davis et al [19] %
Expectant management	10 (8.4 %)	59%
Medical management	46 (38.98 %)	06%
Surgical management	62 (52.5 %)	35%
Radiological Management (UAI,MRIGUs)	00 (0 %)	00%

In present study women with asymptomatic fibroids (8.4%) had expectant management. The surgical management was needed in (52.5%) and medical management in (38.98%) cases. While in Davis et al [19] study had expectant management (59%) and surgical management (35%). Medical management for uterine fibroids target hormones those regulates menstrual cycle, treating symptoms such

as heavy menstrual bleeding and pelvic pressure. They do not eliminate fibroids but may shrink them. The present study has included small& asymptomatic or less symptomatic fibroids to which medical therapy was offered as an outdoor patient. Radiological management like (Ureteric artery embolization, MRI guided focused ultrasound therapy) was not to given to any patients.

Table 5: Medical modalities used in present series

Medical management	Age(years)				
	<20	21-30	31-40	41-50	>50
Tranexamic acids/NSAIDS	00	06	37	12	02
Hormones /Progesterone /Combined pills	00	03	07	02	00
LNG-IUD	00	02	03	02	00
GnRH Analogus	00	00	04	00	00
SPRM	00	01	08	00	00
Blood transfusion	00	00	01	04	02

This table shows various medical modalities of treatment in present series. Iron supplement was given to every woman. Medical therapy is aimed to reduce heavy menstrual bleeding. Tranexamic acids/NSAIDS (57cases), hormones/ progesterone/combined pills, (12 cases), LNG- IUD (07 cases), GnRH analogues (04cases), progesterone receptor modulators (09cases) are the options for patients who need symptom relief, preoperatively or who are approaching menopause. Antibiotics

therapy was given in PID associated with local or systemic infections. LNG-IUD was offered to (07) cases of reproductive age group having AUB. In 2009, the Food and Drug Administration (FDA) approved the LNG-IUS to treat heavy menstrual bleeding in women who opt for an intrauterine device for contraception. LNG-IUD (Mirena) provides an incredible nonsurgical alternative in treatment of menorrhagia which is reversible and spares fertility.

Tables 6: Surgical intervention in present series

Surgical modalities N=62	Present study	khyade et al [93] %
Hysterectomy	N=52(83.87%)	-
Abdominal hysterectomy	31 (50%)	66%
Vaginal hysterectomy	07 (11.29%)	10%
Total laparoscopy hysterectomy	14 (22.58%)	13%
Myomectomy	N=10 (16.39)	-
Abdominal	04 (6.6%)	02%
Laparoscopy	06 (9.8%)	02%
Hysteroscopy	00 (00%)	-

This table shows various surgical interventions in present series. Hysterectomy was performed in 52 cases (83.87%). Surgical interventions should be tailored to the size, numbers, and location of fibroids.

The patients age, symptoms, desire to maintain

fertility and access to the treatment and the physicians experience are contributing factors to decide surgical modalities. Hysterectomy (83.87%) was the common surgical interventions in present series while it is (89%) Khyade et al (2017) [12]. In present study in myomectomy was performed in (16.4% cases) while it is (04%) in khyade et

al(2017) [12].

Myomectomy is an operation more required in infertile patients to remove fibroids while preserving the uterus. Histopathological analysis of all the surgically removed specimen was carried out for clinical correlation, further management and follow up.

Conclusion:

Uterine fibroids are a prevalent condition affecting women of reproductive age worldwide, often presenting with menstrual dysfunction. While they are rarely the sole cause of subfertility, they can be associated with medical comorbidities such as anemia, diabetes, hypertension, and obesity.

Ultrasound (USG) is a cost-effective and accurate tool for diagnosis. Management strategies vary depending on the size and symptoms of the fibroids. Expectant management is suitable for small and asymptomatic fibroids, while medical management aims to reduce blood loss and fibroid size, though affordability and side effects of drugs can be limiting factors.

Surgical intervention, such as myomectomy or hysterectomy, is required for large and symptomatic fibroids, with laparoscopy and hysteroscopy now preferred over traditional open surgery. However, non-surgical and medical treatment options remain limited, emphasizing the importance of prevention strategies for uterine fibroids to improve women's health and reduce healthcare costs.

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