

## Clinico-Epidemiological Spectrum and Factors Associated with Uterine Fibroids

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### Abstract

**Aim:** The aim of the present study to assess the clinical profile and factors associated with uterine fibroids at tertiary health care center.

**Material & methods:** This was a prospective study carried out in the Department of Obstetrics and Gynaecology, SKMCH, Muzaffarpur, Bihar, India for the period of 1 year. Study population were patients presenting with uterine fibroid. Total 100 patients were studied during study period.

**Results:** Majority of the patients were in the age group of 31 -40 years followed by 41-50 years. Fibroid was not seen below 20 years. Majority of the patients with fibroid were with parity 1-2. 10 patients were having parity above 4. Majority (49%) patients were with size of uterus corresponding to 13-20 weeks followed by 21-24 weeks (31%). Uterine size >24 weeks was observed in 20% patients. 75% patients were having menstrual disturbances. 80% patients showed anaemia according to hemoglobin estimation. It can be due to excessive bleeding during menstruation. 44% patients complained of abdominal lump. Other symptoms and signs observed were pain in lower abdomen (16%), Dysmenorrhoea (30%), urinary frequency (14%), dyspareunia (13%), infertility (20%) and mass protruding out of vagina (11%). Single intramural fibroid was observed most commonly (63%) followed by multiple submucosal fibroids (17%). Subserous fibroids were seen in 8 patients, cervical fibroids were seen in 10% patients and only 2 patients had broad ligament fibroid.

**Conclusion:** It was concluded that uterine fibroids are commonly seen in females of reproductive age group and present with menorrhagia and abdominal pain. Uterine fibroids are more commonly seen in 30-40 age group. Menstrual disturbances are the most common symptom.

**Keywords:** uterine fibroids, clinical profile, factors

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### Introduction

Uterine fibroid (leiomyomas or myomas) are benign monoclonal tumours of smooth muscles taking origin in the myometrium of the uterus. [1-3] Uterine fibroid is most common in women during their middle and late reproductive period i.e., mostly during their childbearing age. [4] Abortion and adverse obstetric outcome are linked to fibroids. [5] Uterine fibroid accounts for 20% of women in their childbearing age and they affect up to 70-80% of women. [6,7] In India, the incidence is high, and it inflicts a heavy burden on women's health care system. [8] Prevalence estimates range from 45% to 68.6% and it is underestimated because of its asymptomatic nature in women. [9]

Growth of fibroid is dependent on estrogen production, especially continuous estrogen secretion when uninterrupted by pregnancy and lactation, it is the most important risk factor for the development of myomatous fibroid. Fibroids occurs in 20-40% of women during reproductive age and 11-19% in

perimenopausal age. [10] The site, size and numbers of fibroid vary from one woman to another. Symptoms depend on the location of the lesion and its size. Woman with fibroids can be asymptomatic or may present with menorrhagia, pelvic pain with or without dysmenorrhoea or pressure symptoms, infertility and recurrent pregnancy loss. [11] Fibroids lead to heavy vaginal bleeding lead to anemia and iron deficiency. Fibroids may also present alongside endometriosis, which itself may cause infertility. Adenomyosis may be mistaken for or coexist with fibroids. In very rare cases, malignant growth, leiomyosarcoma can develop. [12] Medical management at present includes use of GnRH, selective estrogen receptor modulators (SERMs), antiprogestins (RU486 and asnoprisinil), and aromatase inhibitors (cabegoline, danazol, and gestrinone). [13]

Diagnosis is chiefly clinical, aided by ultrasonography. The management ranges from

expectant, conservative, to surgical and should be individualized on the basis of the severity of symptoms, size of the fibroid, the desire for fertility, and the response to initial mode of management. Medical management at present includes use of GnRH, selective estrogen receptor modulators (SERMs), antiprogestins (RU486 and asnoprisinil), and aromatase inhibitors (carbogoline, danazol, and gestrinone). [14] Surgical treatment is myomectomy or hysterectomy.

The aim of the present study to assess the clinical profile and factors associated with uterine fibroids at tertiary health care center.

### Material & Methods

This was a prospective study carried out in the Department of Obstetrics and Gynaecology, SKMCH, Muzaffarpur, Bihar, India for the period of 1 year. Study population were patients presenting with uterine fibroid. Total 100 patients were studied during study period.

#### Inclusion Criteria

- Patients presenting with uterine fibroid.

#### Exclusion Criteria

- fibroid and pregnancy
- Postmenopausal
- Patients not willing for surgery
- Patients who have not given consent for study.

#### Methodology

This study was approved by ethical committee of the hospital. A valid written consent was taken from patients after explaining about the study and operative procedure.

It was explained in their own language the details of the history that will be elicited from them, including socio demographic profile, detailed menstrual history, history of present illness, medical illness, personal and family history. Investigations that would be done including hematological investigations, non-invasive tests like ultrasound, invasive tests like endometrial biopsy are explained to the patient.

Detailed history was taken regarding the sociodemographic profile including age, parity,

abortions, socio economic status, occupation, age at menarche, chief complaints, family history, Diet, Caffeine intake, smoking, alcohol, OC Pills, hormone replacement therapy, storage of water in plastic containers, insecticide exposure. Medical problems like hypertension and diabetes, hypothyroidism, bowel and bladder habits, family history of fibroids, breast or genital malignancies was taken note of. All the patients were evaluated by a thorough general examination.

The height and weight was measured and BMI is calculated. General health was evaluated by the presence, absence, and degree of Pallor, icterus, cyanosis, clubbing, generalized lymphadenopathy and pedal edema. Vitals were checked. CVS, respiratory system, CNS, GIT were examined. Detailed gynaecological examination by per abdominal examination, per speculum and bimanual examination were done to evaluate the uterus and adnexa.

Hematological investigations including complete blood picture, random blood sugar, blood urea, serum creatinine, thyroid profile and coagulation profile. Ultrasound scan was done transabdominally. Ultrasound scan was done transabdominally with Esaote My lab machine using 5 MHz probe to look for the uterine volume, fibroid volume, type of fibroid, endometrial thickness and any other adnexal pathology. If the endometrial thickness was found to be  $\geq 8$ mm in USG, endometrial biopsy was done and the sample sent for histopathological examination to look for any hyperplasia, atypia or malignancy.

The patients were followed up and appropriate treatment decided after individualizing each case. The details of treatment given were noted. The relation between the various socio demographic factors with the causation of fibroids observed. P value and Odd's ratio calculated for each factor

#### Statistical Analysis

All the data obtained was analysed statistically using the Paired t test. P value was calculated to determine the association between the proposed risk factor and fibroid. The statistical significance level was fixed at  $P < 0.05$ . Data was analysed with appropriate statistical tests.

#### Results

**Table 1: Distribution of patients according to age group and parity**

Age groups in years	N	%
< 20	0	0
21-30	11	11
31-40	47	47
41-50	41	41
>50	1	1
<b>Parity</b>		
0	14	14
1-2	47	47
3-4	29	29
>4	10	10

Majority of the patients were in the age group of 31 -40 years followed by 41-50 years. Fibroid was not seen below 20 years. Majority of the patients with fibroid were with parity 1-2. 10 patients were having parity above 4.

**Table 2: Distribution of patients according to size of uterus**

Size of uterus (Weeks)	N	%
13-20	49	49
21-24	31	31
>24	20	20

Majority (49%) patients were with size of uterus corresponding to 13-20 weeks followed by 21-24 weeks (31%). Uterine size >24 weeks was observed in 20% patients.

**Table 3: Symptoms and Signs**

Symptoms and sign	No of patients	Percentage
Menstrual disturbances	75	75
Abdominal lump	44	44
Pain in lower abdomen	16	16
Dysmenorrhoea	30	30
Urinary frequency	14	14
Dyspareunia	13	13
Infertility	20	20
Anaemia	80	80
Mass protruding out of vagina	11	11

75% patients were having menstrual disturbances. 80% patients showed anaemia according to hemoglobin estimation. It can be due to excessive bleeding during menstruation. 44% patients complained of abdominal lump. Other symptoms

and signs observed were pain in lower abdomen (16%), Dysmenorrhoea (30%), urinary frequency (14%), dyspareunia (13%), infertility (20%) and mass protruding out of vagina (11%).

**Table 4: Distribution of patients according to USG findings of fibroid**

USG findings of fibroid	N	%
Single intramural	63	63
Multiple submucosal	17	17
Subserous	8	8
Cervical	10	10
Broad ligament fibroid	2	2

Single intramural fibroid was observed most commonly (63%) followed by multiple submucosal fibroids (17%). Subserous fibroids were seen in 8 patients, cervical fibroids were seen in 10% patients and only four patients had broad ligament fibroid.

### Discussion

Uterine fibroids or myomas or leiomyoma of uterus are the most common type of benign tumour of uterus and also most common pelvic tumour in women. [15] In women by the age of 35 incidence of fibroids is 60% and over 80% by the age of 50. [16] They originate from myometrial smooth muscle cells. [17,18] Exact etiology is not known but the cause estimated to be is oestrogen and progesterone which proliferate tumour growth as fibroid rarely occur before menarche and reduces after menopause. [19,20] Risk factors for developing fibroids are age, early age at menarche, reduced fertility, frequent alcohol and caffeine consumption, obesity, hypertension, diabetes mellitus, previous

pelvic inflammatory disease. [21] While decreased exposure to oestrogen found with smoking, exercise and increased parity is protective. [22]

Majority of the patients were in the age group of 31 -40 years followed by 41-50 years. Fibroid was not seen below 20 years. Similar findings were seen in Zhang et al [23] and Coronado et al [24] where they observed perimenopausal age group was more affected. Majority of the patients with fibroid were with parity 1-2. Similar findings were observed in Samadi AR et al [25] and Sato F et al. [26] 10 patients were having parity above 4. Majority (49%) patients were with size of uterus corresponding to 13-20 weeks followed by 21-24 weeks (31%). Uterine size >24 weeks was observed in 20% patients. 75% patients were having menstrual disturbances. 80% patients showed anaemia according to hemoglobin estimation. It can be due to excessive bleeding during menstruation. 44% patients complained of abdominal lump. Other

symptoms and signs observed were pain in lower abdomen (16%), Dysmenorrhoea (30%), urinary frequency (14%), dyspareunia (13%), infertility (20%) and mass protruding out of vagina (11%). Single intramural fibroid was observed most commonly (62%) followed by multiple submucosal fibroids (18%). Single intramural fibroid was observed most commonly (63%) followed by multiple submucosal fibroids (17%). Subserous fibroids were seen in 8 patients, cervical fibroids were seen in 10% patients and only 2 patients had broad ligament fibroid. Gavli et al [20] reported that majority of patient had lower abdominal pain (44.11%), 17.64% had menorrhagia and 13.23% suffered from dysmenorrhea. In various studies conducted by Buttran et al and Okolo et al showed that vast majority of leiomyomas are asymptomatic. and most common symptom of uterine leiomyoma is abnormal uterine bleeding. [27-29] Lumsden et al in their study clinical presentation of uterine fibroids on myomectomy found that 30% of women suffered from menorrhagia. [29]

### Conclusion

It was concluded that uterine fibroids are commonly seen in females of reproductive age group and present with menorrhagia and abdominal pain. Uterine fibroids are more commonly seen in 30-40 age group. Menstrual disturbances are the most common symptom.

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