

An Observational Study Assessing Clinical Profile and Factors Associated with Uterine Fibroids at Tertiary Care Hospital**Swati****Senior Resident, Department of Obstetrics and Gynaecology, Rama Medical College Hospital and Research centre, Kanpur, Uttar Pradesh, India****Received: 01-06-2023 Revised: 20-07-2023 / Accepted: 27-08-2023****Corresponding author: Dr. Swati****Conflict of interest: Nil****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 department of obstetrics and Gynaecology for the period of nine months . Study population were patients presenting with uterine fibroid. Total 200 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. 22 patients were having parity above 4. Majority (48%) patients were with size of uterus corresponding to 13-20 weeks followed by 21-24 weeks (32%). 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%). Subserous fibroids were seen in 14 patients, cervical fibroids were seen in 11% patients and only four 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 fibroids (leiomyoma) are the most common benign tumors of the genital organs in women of childbearing age. The peak incidence of symptoms observed among women in their 30s and 40s. [1,2] Its incidence ranges from 5 to 20%. [3,4] They consist mainly of smooth muscle cells of the myometrium and depending on their site of origin they may be intramural, submucosal or serosal, but at times might be present at unusual sites like the broad ligament or cervix and contain different amounts of fibrous tissue. [5] 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. Many factors are recognized as growth promoters, with sex steroids, estrogen and progesterone, being the most frequently studied. [6-8]

Increasing age up to menopause, with incidence peaking in the fourth decade, Black ethnicity, and obesity are the well-known risk factors for fibroids. [9-11] Both reproductive and environmental factors have been described. Some of the most common reproductive factors include nulliparity, early menarche, and the use of oral contraceptives before 16 years of age. Additional environmental factors, such as diet, particularly vitamin D deficiency, and environmental toxins, are the subject of ongoing investigations. [12,13] Some dietary factors, including increased consumption of fruits, vegetables, and low-fat dairy products, are associated with a reduced risk.

The uterine fibroids are classified into three categories according to their anatomical location: submucous fibroids- located in the muscle below the endometrium; interstitial/intramural fibroids are most common and located within the uterine wall; and sub serous fibroids located just below the serosal

surface of the uterus. Fibroids may be single or multiple and mostly start in an intramural location and with further growth some lesions may develop towards outside of the uterus or towards the internal cavity. Most fibroids are usually asymptomatic and have slow growth. [14]

Fibroids occur in 20-40% of women during reproductive age and 11-19% in perimenopausal age. [15] They are oestrogen dependent and are concurrently seen with endometrial hyperplasia. [16] They are usually asymptomatic but may cause menstrual disorders like menorrhagia & dysmenorrhea, lower abdominal pain, feeling of pelvic mass and infertility. [17] Uterine fibroids have been seen to be a significant cause of morbidity as they lead to a wide range of symptoms like heavy menstrual bleeding, pelvic pain, infertility, recurrent pregnancy loss and pressure symptoms, thus affecting the quality of life of women. 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. [18]

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 (cabegoline, danazol, and gestrinone). [19] 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 Department of Obstetrics and Gynaecology, Rama Medical College Hospital and Research centre, Kanpur, Uttar Pradesh, India for the period of nine months. Study population were patients presenting with uterine fibroid. Total 200 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.

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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 ≥ 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	20	10
31-40	96	48
41-50	80	40
>50	4	2
Parity		
0	26	13
1-2	96	48
3-4	56	28
>4	22	11

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. 22 patients were having parity above 4.

Table 2: Distribution of patients according to size of uterus

Size of uterus (Weeks)	N	%
13-20	96	48
21-24	64	32
>24	40	20

Majority (48%) patients were with size of uterus corresponding to 13-20 weeks followed by 21-24 weeks (32%). Uterine size >24 weeks was observed in 20% patients.

Table 3: Symptoms and Signs

Symptoms and sign	No of patients	Percentage
Menstrual disturbances	150	75
Abdominal lump	88	44
Pain in lower abdomen	32	16
Dysmenorrhoea	60	30
Urinary frequency	28	14
Dyspareunia	26	13
Infertility	40	20
Anaemia	160	80
Mass protruding out of vagina	22	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	124	62
Multiple submucosal	36	18
Subserous	14	7
Cervical	2	11
Broad ligament fibroid	4	2

Single intramural fibroid was observed most commonly (62%) followed by multiple submucosal fibroids (18%). Subserous fibroids were seen in 14 patients, cervical fibroids were seen in 11% 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.[20] In women by the age of 35 incidence of fibroids is 60% and over 80% by the age of 50. [21] They originate from myometrial smooth muscle cells. [22,23] 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. [24,25] 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. [26] While decreased exposure to oestrogen found with smoking, exercise and increased parity is protective. [27]

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 [28] and Coronado et al [29] 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 [30] and Sato F et al. [31] 22 patients were having parity above 4. Majority (48%) patients were with size of uterus corresponding to 13-20 weeks followed by 21-24 weeks (32%). 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%). Subserous fibroids were seen in 14 patients, cervical fibroids were seen in 11% patients and only four patients had broad ligament fibroid. Gavli et al [25] 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 Buttrian 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. [32-34] Lumsden et al in their study clinical presentation of uterine fibroids

on myomectomy found that 30% of women suffered from menorrhagia. [34]

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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