

Evaluating the Epidemiological Insights, Etiology, and Clinical Manifestations, of Uterine Fibroids

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Abstract

Objective: This is a cross-sectional study done to identify epidemiological perspectives, etiological factors, and clinical presentations of uterine fibroids. **Methods:** The study subjects were 50 patients diagnosed as a case of fibroid uterus, and admitted Department of Gynaecology and Obstetrics, Rangpur Medical College and Hospital from March 2011 to March 2012. A pre-selected data sheet was formed to collect relevant information about the women. All the information regarding age, parity, socioeconomic status, detailed menstrual history, obstetrics history, clinical exam, per speculum exam, and pelvic exam & investigations were done according to pre-selected data. **Result:** Total study population was 50 among them greater frequency was found in the fourth (60%) decades of life and the majority of them (56%) were of middle-class families 92% where 50% were illiterate. Most (48%) of the patients were in para 3-5 and 72% of patients used contraception. We found that the majority (80%) of patients presented with menstrual abnormalities and out of 50 patients 41 patients had palpable uterus. Maximum (36%) patients suffered from obesity and 96% of patients had a haemoglobin percentage less than 60%. 98% of patients had conclusive USG findings in their clinical diagnosis. **Conclusion:** The majority of these patients were between 31 to 40 years of age. The common mode of presentation was menstrual disturbances 80% such as menorrhagia and dysmenorrhea. Diagnosis was based on clinical exam and some patients required USG.

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INTRODUCTION

Fibroids are the most common gynaecological tumors and are present in 30% of women of reproductive age [1-3]. They are most frequently found in women in their fifth decade of life and are quite rare before menarche. Fibroids are common in women who are nulliparous, overweight (3 times greater in those weighing 70 kg or more compared with women weighing less than 50 kg), those with a family history of fibroids and Afrocaribbean ethnicity [4].

Fibroid is composed of smooth muscle tissue although there is a variable amount of connective tissue. Each individual fibroid is monoclonal and arises from a

somatic mutation in a progenitor myocyte [5]. In patients with multiple myomas, different karyotypic are noted which suggests that each myoma arises as an individual event [6]. Fibroids have increased expression of estrogen, progesterone, & insulin-like growth factor 1 & 2 receptors than the neighboring myometrium. Myomas are estrogen dependent; they grow in response to estrogen stimulation and regress after menopause [7].

The locations, number & size of uterine myomas usually correlate with their clinical significance, with most myomas being small, asymptomatic, & clinically inconsequential. Common problems associated with myomas are pelvic, abdominal or back discomfort; urinary bladder irritability; abnormal

uterine bleeding; bowel dysfunction; infertility; & pregnancy loss & or complications. The most common symptom of uterine fibroids is abnormal uterine bleeding [2, 8].

30% of women suffering from menorrhagia [8]. Family history is also a risk factor developing fibroids with a threefold higher risk in first degree relatives [9]. Their growth is stimulated by estrogen & progesterone, thus number & size of fibroid falls at the menopause [10].

Fibroids are also associated with reproductive dysfunction. Women with uterine myomas have a 3.5-fold increase in the incidence of intrauterine growth restriction (6.8%), a fourfold increase in placental abruption (2.8%), a fivefold increase in the incidence of transverse lie or breech presentation (16.9%), a five-fold increase in the cesarean section rate (57.7%), a 70% increase in premature rupture of membranes (9.6%) and are three times more likely to receive transfusion (4.2%) [11]. Treatment of uterine fibroids must be individualized, based on symptoms, size & rate of growth of uterus & women's desire for fertility [12].

MATERIALS AND METHODS

The study was designed as a cross-sectional investigation conducted at the Department of Gynaecology & Obstetrics, Rangpur Medical College & Hospital, Rangpur, spanning from March 2011 to March 2012. The study population initially involved 56 participants, but six patients opted out, resulting in a final sample size of 50 individuals chosen through a randomized purposive technique. The selection process involved patients admitted through the outpatient department based on clinical presentation and general examination, including physical examination, per

speculum examination, and bimanual examination. Diagnosis was confirmed through ultrasonography (USG) or transvaginal ultrasonography (TVU), and participants were subsequently admitted for definitive management.

Inclusion Criteria: All cases of symptom producing fibroid uterus in reproductive age perimenopausal age.

Exclusion Criteria:

- Fibroid uterus with any malignancy in female genital organs.
- Fibroid uterus with endometriosis.
- Fibroid uterus with systemic diseases. E.g. Liver disease, renal disease, Heart disease.

Information was collected from 56 patients randomly those were selected as symptom producing fibroid uterus from outdoor admitted in Gynae ward by using a questionnaire made for recording all relevant parameters under study, after proper counselling & taking written consent of the patient or her legal guardian. Data were collected by interview and laboratory data methods. All data was compiled on a master sheet & processed as frequency percentage in tables using Microsoft Excel Statistical program and analyzed by SPSS version-12. Written informed consent was taken from the patient.

RESULTS

This descriptive type cross-sectional study included 56 consecutive cases of leiomyoma of uterus admitted out of them 6 patients were declined from the study & 50 patients were managed in the department of obstetrics and gynaecology, Rangpur Medical College Hospital, Rangpur during March 2011, March 2012.

Table-I: Age distribution of the patient (n=50)

Age group (years)	Frequency	Percentage (%)
≤20	0	0
21-30	1	2
31-40	30	60
41-50	18	36
>50	1	2

Table-I: shows that among the 50 patient in this study, 36% were above 40 years of age. Majority of this patient (60%) were between 31 to 40 years of age.

Table-II: Socio-economic status of the study population (n=50)

Income group	Income per Capita per year Tk.	Frequency	Percentage (%)
Lower Class	21,000-30,000	18	36
Middle Class	31,000-40,000	28	56
High Class	41,000-≥50,000	04	8

Table-II: shows that among the 50 patients in this study, majority of the patients (56%) were of middle class family and only eight (8%) percent were of higher class family.

Table-III: Educational status of the study population (n=50)

Education	Frequency	Percentage (%)
Illiterate	25	50
Primary	17	34
Secondary	6	12
Graduation & Post Graduation	2	4

Only 4% patients were of higher education, 34% were of primary, 12% were of secondary, 50% were Illiterate.

Table-IV: Parity of the patients (n=50)

Para	Frequency	Percentage (%)
0	4	8
1-2	18	36
3-5	24	48
6-7	4	8

Table-IV: shows that the, majority (48%) of the patients were in para 3-5 group. Only 8% of patients were in para 0 group. Among the patients higher parity was 7.

Table-V: Age of last child (n=50)

Age group (years)	Frequency	Percentage (%)
1-5	4	8
6-10	12	24
11-15	12	24
16-20	20	40

Table-V: shows that in 40% patients, age of last child varied from 16-20 years.

Table-VI: Contraceptive History (n=50)

Contraceptive history	Frequency	Percentage (%)
No contraception	14	28
Natural methods	8	16
Barrier methods	1	2
Oral pill	7	14
I.U.C.D	1	2
Injectable	6	12
Tubectomy	13	26

Table-VI: shows 72% patients used contraception, among them 26% had tubal ligation, 28% had no contraception, 14% used oral contraceptive pill, only 12% had taken injectable contraceptive, 28% had no contraception.

Table-VII: Presenting symptoms and signs (n=50)

Signs and Symptoms	Frequency	Percentage (%)
Menstrual disturbances	40	80
Progressive menorrhagia	33	66
Polymenorrhagia	4	8
Irregular bleeding	3	3
Normal menstruation	10	20
Abdominal lump	16	32
Pain in lower abdomen	16	32
Dysmenorrhoea	15	30
Infertility Primary	2	4
Secondary (voluntary & involuntary)	39	78
Heaviness in lower abdomen	16	32
Urinary frequency	6	12
Dyspareunia	9	18

Table-VII: shows that majority 80% of patients in this study presented with menstrual abnormalities. Among the 50 patients 66% had progressive

menorrhagia, 8% had polymenorrhagia, and irregular vaginal bleeding in 3% cases and 9% had normal menstruation.

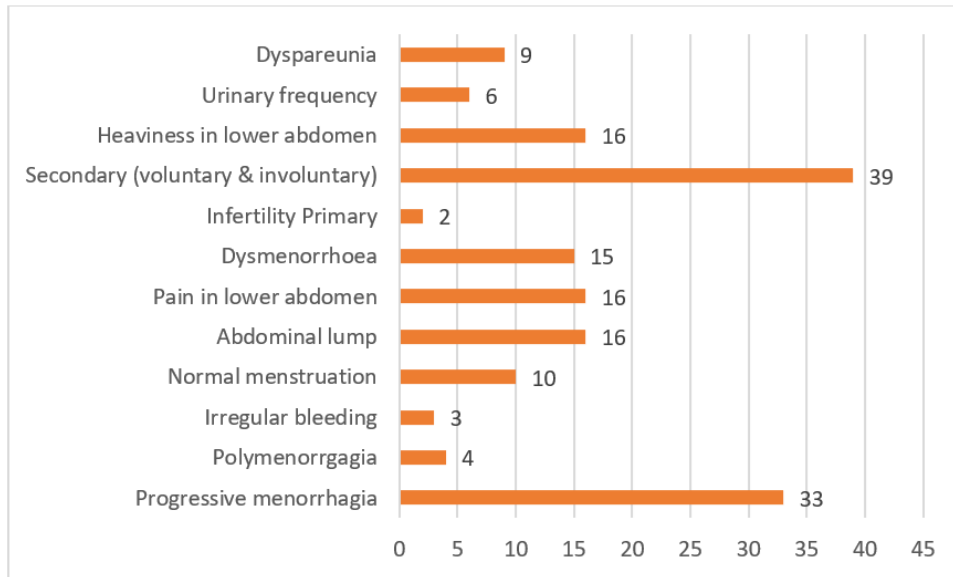


Figure 1: Graphical representation symptoms and signs (n=50)

Table-VIII: Menstrual period and cycle (n=50)

Menstruation	Frequency	Percentage (%)
Menstrual cycle		
Regular	46	92
Irregular	4	8
Menstrual period (days)		
Up to 7	9	18
8-10	34	68
11-15	7	14

Table-VIII: shows 92% cases had regular menstrual cycle. 68% had a duration of 8-10 days with

heavy flow on 2nd and 3rd day of the cycle. Only 4% patients had irregular bleeding.

Table-IX: Size of uterus (n=50)

Size of uterus	Frequency	Percentage (%)
<8 wks of preg. size	1	2
8-10 wks preg. size	8	16
10-12 wks of preg. size	5	10
12-14 wks of preg. size	10	20
14-16 wks of preg. size	18	36
16-18 wks of preg. size	5	10
18-24 wks of preg. size	3	6

Table-IX: shows out of 50 patients 41 patients had palpable uterus. Among them 20% had 12-14 weeks (wks) size of uterine mass.

Table-X: Associated medical condition (n=50)

Medical conditions	Frequency	Percentage (%)
Obesity	18	36
Hypertension	11	22
Diabetes	2	4
Both hypertension and diabetes	4	8

Table-X: 36% patients suffered from obesity, 22% had hypertension, 4% had diabetes and 8% both diabetes and hypertension.

Table-XI: Haemoglobin percentage at the time of admission (n=50)

Haemoglobin %	Frequency	Percentage (%)
30-40	4	8
41-50	20	40
51-60	24	48
61-70	2	4

Table-XI: shows 96% patients had haemoglobin percentage less than 60% and 88% patients had less than 40%.

Table-XII: Ultrasonographic (USG) findings (n=50)

USG findings	Frequency	Percentage (%)
Conclusive	49	98
Inconclusive	1	2

Table-XII: 98% patients had conclusive USG finding, only 2% had doubtful USG findings.

DISCUSSION

Leiomyoma most commonly produces symptoms between the ages of 35-40 years but probably exists in microscopic form before the age of 30 years [36]. In the present study in Table I, the incidence is higher among the age group of 31-40 yrs which correlates with other studies [13].

Table II shows that among 50 patients majority (56%) were of middle-class families and Table III shows 50% of patients were illiterate and had low socioeconomic status & they do not come to physicians unless they are symptomatic & unless the myoma hampers their day-to-day activities. Bhat showed in a series of 150 cases that a maximum of 85% of patients were nulliparous or primiparous, and only 36% percent of patients were multiparous [14].

In the present study Table IV shows that among 50 patients majority 48% were multiparous and 8% of patients were nulliparous which does not correlate with the study. Because they are poor, the majority are illiterate and have got early marriage. So, they are multiparous but have long infertility and the age of the last child is 11-15 years.

Begum studied 50 cases at Sir Salimullah Medical College and Mitford Hospital. Where the maximum number of patients was multiparous and parity was mostly between 3 and 5 [15]. In the present study, myoma uterus is more common in multiparous women. Most of the present series in Table-V had their last child 11-15 years back & they have long infertility which increases the rate of growth myoma.

In this study in Table VI, 72% of patients used contraception, among them 26% of patients had tubal ligation, 14% of patients used oral contraceptives, and 14% used IUCD and injectable contraceptives.

Voluntary contraception for a considerable period of time may be a predisposing factor in the etiology of leiomyoma.

Infertility with leiomyoma is a definite factor in 2-3% of cases [16]. This is quite comparable with our study where infertility was found to be 4%. Still, leiomyoma with infertility is not a common problem in our country. Maximum number of patients had completed their family before the age of 30 years in the present study.

Bhat [30] showed in a series of 150 cases that was carried out in India where 40% of patients had menstrual disturbance. In this study in table-VII, the most common manifestation was menstrual abnormalities. 40 patients (80%) had menstrual disturbances. Most of the patients had progressive menorrhagia. None of the patients complained of oligomenorrhoea or amenorrhoea.

Begum studied 50 cases at Sir Salimullah Medical College and Mitford Hospital, where 15 patients (30%) had dysmenorrhoea, which is mostly congestive in type [15]. In this study, 15 patients (30%) had dysmenorrhoea, which is mostly congestive in type. The incidence of dysmenorrhoea in the present series correlates with this study.

Bhat studied 150 cases where 26% of cases have complaints of abdominal lump. In the present study in table-VII, the presence of abdominal mass is a presentation in myoma patients [14]. Among the 50 patients, 18 (36%) cases presented with a mass in the lower abdomen.

Begum studied 50 cases where 34% of patients were obese 24% of patients had hypertension and 4% patients had diabetes [15]. In the present study in table-X, obesity was associated with 36% of cases. 22% of patients had hypertension and 4% of patients had diabetes which more or less correlates with that study.

CONCLUSION

The majority of patients were in the age group of 31-40 years, with 36% above 40 years. The socioeconomic status predominantly comprised the middle class (56%). Educational distribution indicated a higher prevalence of illiteracy (50%). Parity distribution showed that 48% of patients were in the para 3-5 group. Menstrual disturbances were the most common presenting symptom (80%), with 66% experiencing progressive menorrhagia. Contraceptive history indicated that 72% of patients had used contraception, with 26% undergoing tubal ligation. Most patients presented with regular menstrual cycles (92%), and 36% were found to be obese. Hemoglobin levels were notably low, with 96% having less than 60%.

LIMITATION OF THE STUDY

In this study we had following limitations:

- This study could be more informative if sample size were larger than this.
- Per operative observation was not possible in all cases. So, some cases were taken from Registered.
- All patients were not came for follow up after 6 weeks.

RECOMMENDATION

This is a hospital based small study. Its result may not reflect the actual information of general population. Therefore, a multicenter study including a large number of patient need to be undertaken to find out etiology, clinical presentation & management of fibroid uterus.

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