

## Original Article

# Study on Menorrhagia: Correlation with Fibroids

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### Abstract

**Background:** Excessive menstrual bleeding called menorrhagia is a common presentation of females seeking medical attention. Normally there is considerable variation in menstrual cycle length, duration and flow. **Objective:** To find out the association of fibroids in patients presenting with menorrhagia. **Materials and Methods:** This cross-sectional prospective study was done from January to June 2013 among the female patients admitted in the department of Gynaecology & Obstetrics in Dhaka Medical College & Hospital. Patients presented with the complaints of menorrhagia and treated by surgical management were included. **Results:** Total 96 patients were included. The age range was 28–49 years with mean age  $41.08 \pm 5.174$  years. In 92 (46.5%) patients excessive per vaginal bleeding was noted. Pain during menstruation was another major complaint (45, 46.5%). Lower abdominal heaviness was reported in 32 patients (16.2%). In about half of the patients (49%) uterine fibroid was diagnosed. In 29 patients (30.2%) adenomyosis was the finding. Out of 47 fibroid cases 39 (83%) had per vaginal bleeding history. Only 10 patients without fibroid experienced pervaginal bleeding. Chi-squared test was done to see whether there was any association between these two variables and the result was highly significant ( $p < 0.001$ ). **Conclusion:** As medical treatment is disappointing and surgery is the mainstay of treatment of menorrhagia caused by fibroids, diagnosis should be confirmed by different imaging techniques. Advancement in the field of imaging like saline infusion sonohysterography and hysteroscopy helps greatly to diagnose submucous fibroids and save patients from undue prolongation of medical treatment.

**Key words:** Fibroid; Menorrhagia; Myomectomy

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## Introduction

Fibroids, also called myomas or leiomyomas, are benign smooth muscle tumours. They are the most common uterine neoplasms (benign tumours). Fibroids are usually multiple. At least half of all women over the age of 35 years have fibroids, but less than 50% have symptoms. They are more common among nulliparous (no children) and obese women and shrink after the menopause. In Dhaka Medical

College Hospital, like other medical hospitals in the world, myoma is the most common indication of hysterectomy and most of the surgeries for myoma are performed on large-sized uterus with myoma of considerable sizes, often posing problems at its removal.

Excessive menstrual bleeding called menorrhagia is a common presentation of females seeking medical attention. Normally there is considerable variation

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in menstrual cycle length, duration and flow. This variation takes abnormal pattern due to a number of factors. These factors may be hormonal (i.e., changes in hypo-thalamo-pituitary ovarian axis) or pathological (i.e., malignancies) or physical (i.e., presence of fibroids or IUCDs) in origin. Menorrhagia is thought to be associated with uterine fibroids, adenomyosis, pelvic infections, endometrial polyp, clotting defects and IUCD. In women with menstrual blood loss greater than 200 mL, over half of the subjects will have the fibroids.<sup>1</sup> Uterine myoma commonly known as fibroid is the commonest benign pelvic tumours involving myometrial smooth muscle and extracellular matrix (protein, collagen and elastin) in female and forms the commonest indication of hysterectomy. Fibroids are one of important causes of menorrhagia resistant to conventional methods of medical treatment.<sup>2</sup> Fibroids are commonest tumours occurring in 20% of all women of reproductive age.<sup>3</sup>

Uterine myoma affects millions of women and accounted for 60 percent of the 600,000 hysterectomies annually performed in the United States.<sup>4</sup> Menorrhagia is the most frequent complaint related to myoma. Myomas, located at different sites, such as sub-serous, intramural, sub-mucous, broad ligament, cervical, either single or multiple, are clinically apparent in up to 20% of women causing significant morbidity such as prolonged and heavy menstrual bleeding (menorrhagia).<sup>5</sup> Menorrhagia is defined as the menstruation at regular cyclic intervals but with excessive flow and duration. Clinically it is defined as total menstrual blood loss exceeding 80 mL per cycle or menstrual flow lasting longer than 7 days.<sup>6</sup> Menorrhagia has been quoted as the commonest symptom of myoma. However, there are conflicting reports regarding association of morphology of uterine myoma and menorrhagia.<sup>5,6</sup>

The aetiology of fibroids remains unknown although it has been postulated that they are oestrogen-dependent, thus their usual age distribution is from menarche to menopause. They grow slowly so that they rarely present problems until third decade of life.<sup>7</sup>

Based on these findings, this study was done to evaluate why women report so late whether it is due to the lower incidence of sub-mucous myoma,

which often produces symptoms earlier because of menorrhagia or it is due to poor health-seeking behaviour of Bangladeshi women because of unawareness. Moreover, there have been no such studies in Bangladesh correlating myoma with clinical symptoms. The prime aim of the study was to verify whether menorrhagia correlates with the size and site of myoma in view of controversial reports showing varied relationship between myoma morphology and menorrhagia.

## Materials and Methods

This was a cross-sectional study done in Department of Obstetrics & Gynaecology of Dhaka Medical College & Hospital from January 2013 to June 2013 among the female patients admitted with the complaints of menorrhagia and treated by surgical management. All the consecutive cases were included in the study period and the expected sample size was calculated, i.e. n=96. Inclusion criteria were the patients admitted with the complaints of menorrhagia and treated by surgical management. Exclusion criteria were menorrhagia treated by medical treatment and those patients who were unwilling to participate in the study. Purposive non-probability sampling technique was used. All the patients included in the study were in their reproductive age group. A detailed history, clinical examination and imaging study were done for preoperative diagnosis. Histopathological confirmation was done after surgery. All data placed in tables and figures and were expressed in frequency and percentage.

## Results

The age range was 28–49 years. The mean age was  $41.08 \pm 5.174$  years. The leading age group was 41–50 years with 59.4% representation followed by 31–40 years (34.4%). There were only 6 (6.3%) patients whose age was 30 years or less (Fig 1).

Most of the respondents were Muslims (90, 93.8%) and 6 patients (6.3%) were Hindus. Majority of the respondents were from rural areas (51, 53%) and 45 (47%) patients were from urban settings. Among the subjects 71 (74%) were housewives and the rest (25, 26%) were service holders.

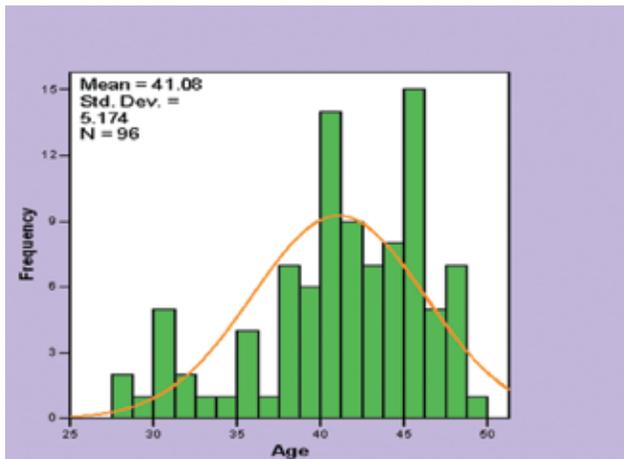


Fig 1. Distribution of the patients according to age

Table I shows the contraception methods adopted by the respondents. Oral pill was most popular among the respondents (59.4%). Permanent method of contraception was adopted by 14.6% patients. Ten patients (10.4%) gave the history of copper T use. No method of contraception was used by 14 (14.6%) patients. Most of the respondents were suffering from mild anaemia (60, 62.5%) and every three in ten patients had moderate anaemia. Eight percent patients had severe anaemia.

Table I: Distribution of the patients by methods of contraception used (N=96)

Contraception method	Frequency	Percentage
Oral pill	57	59.4
Sterilization	14	14.6
IUCD	10	10.4
Barrier method	1	1.0
Nil	14	14.6
Total	96	100.0

Fig 2 shows distribution of patients according to complaints. In 92 (46.5%) patients excessive per vaginal bleeding was noted. Pain during menstruation was another major complaint (45, 46.5%). Lower abdominal heaviness was reported in 32 patients (16.2%). Ten patients (5.1%) complained of pain during coitus.

Table II shows distribution of patients according to signs related to fibroid. Midline swelling was found in 26 (27.1%) of the cases. In 57 (59.4%) cases uterus contour was regular. Seven patients (7.3%) revealed uterine tenderness while anterior fornix was found full in 14 (14.6%) patients.

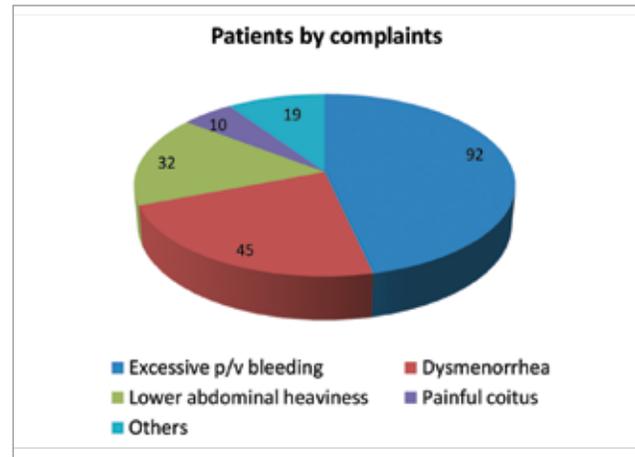


Fig 2. Distribution of the patients by complaints (N=96)

Table II: Distribution of patients according to signs related to fibroid (N=96)

Signs related to fibroid	Frequency	Percentage
<i>Midline swelling</i>		
Present	26	27.1
Absent	70	72.9
<i>Uterus contour</i>		
Regular	57	59.4
Irregular	39	40.6
<i>Uterus tenderness</i>		
Present	7	7.3
Absent	89	92.7
<i>Anterior fornix</i>		
Full	14	14.6
Free	82	85.4

Table III shows distribution of the patients by ultrasonographic findings. In about half of the patients (49%) uterine fibroid was diagnosed. In 44 patients (45.8%) bulky uterus was found. Most of the patients (89, 93%) underwent total abdominal hysterectomy (TAH) and myomectomy was done on seven patients. High rise of temperature was reported in 28 (29.2%) of the cases. In 7 (7.3%) cases wound infection was noted. Most of the patients (89, 92.7%) were uneventful in postoperative outcome. Blood transfusion was needed in 42 (43.8%) patients.

Table III: Distribution of the patients by ultrasonographic findings (N=96)

Ultrasonography findings	Frequency	Percentage
Uterine fibroid	47	49.0
Bulky uterus	44	45.8
Other	5	5.2
Total	96	100.0

Table IV shows the distribution of the patients by histopathological findings. Myoma was found in about half of the patients (49%), adenomyosis in 29 (30.2%) and chronic cervicitis in 20 (20.8%) cases.

Table IV: Distribution of the patients by histopathological findings (N=96)

Histopathological findings	Frequency	Percentage
Myoma	47	49.0
Adenomyosis	29	30.2
Chronic cervicitis	20	20.8
Total	96	100.0

Fig 3 shows the distribution of the cases by location of the fibroids. Fibroid was intramural in 61 (63%) cases, submucosal variant in 23 (24%) and subserosal in 5 (5.2%) patients. Seven patients (7.3%) had fibroid in multiple sites.

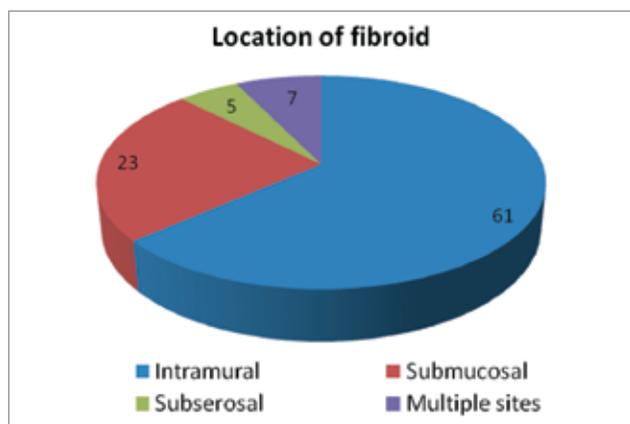


Fig 3. Distribution of patients by locations of fibroids

Association of fibroid with menorrhagia is presented in Table V. Out of 47 fibroid cases per vaginal bleeding was present in 39 (83%) cases and absent in 8 (17%) cases. In non-fibroid cases the scenario was almost reverse. Only 10 patients without fibroid experienced per vaginal bleeding. Chi-squared test was done to

see whether there was any association between these two variables and the result was highly significant ( $p < 0.001$ ).

Table V: Association of fibroid with menorrhagia

Presence of fibroid	Menorrhagia		$\chi^2$	p value
	Present N (%)	Absent N (%)		
Present	39 (83.0)	8 (17.0)	37.585 (df=1)	<0.001
Absent	10 (20.4)	39 (79.6)		

### Discussion

Excessive menstrual bleeding called menorrhagia is a common presentation of females consulting the general practitioners or consultant gynaecologists. Out of 96 selected cases 47 (48.9%) patients were confirmed as having fibroids by histopathology examination of the specimens. Forty nine patients not having fibroid served as internal controls for the analysis.

In this study age range of the patients was 28–49 years with mean age  $41.08 \pm 5.174$  years. The leading age group was 41–50 years with 59.4% representation followed by 31–40 years (34.4%). These findings are consistent with the findings of the study conducted by Malik et al<sup>8</sup> where they reported mean age for the women having fibroids as 39.3 years.

In this study 92 (46.5%) patients had excessive per vaginal bleeding. Pain during menstruation was another major complaint (45, 46.5%). Lower abdominal heaviness was reported in 32 (16.2%) patients. Hafiz et al<sup>9</sup> reported that menorrhagia was present in 37.25% patients without any associated symptoms, heaviness in lower abdomen in 27.45% patients, pain in lower abdomen in 11.76%.

In this study fibroid was intramural in 61 (63%) cases, submucosal variant in 23 (24%) and subserosal in 5 (5.2%) patients. Seven patients (7.3%) had fibroid in multiple sites. These findings are not consistent with the study done by Hafiz et al<sup>9</sup> where they reported 35.29% intramural fibroids and 31.37% submucosal variants.

In this study out of 47 fibroid cases, per vaginal

bleeding was present in 39 (83%) and absent in 8 (17%) cases. Only 10 (20.4%) patients without fibroid experienced per vaginal bleeding. There was significant association of fibroid with per vaginal bleeding ( $p < 0.001$ ). These results are comparable to findings of another study of Sulaiman et al<sup>6</sup>.

Menorrhagia is quite a common problem affecting large number of females. Fibroid is one of the important causes of menorrhagia in young patients with low parity. Diagnosis is made with confidence on clinical findings but ultrasonography is the best diagnostic tool and it can confirm our clinical findings. Large number of drugs are prescribed for symptomatic relief in the patients with fibroids, but medical treatment is disappointing and surgery continues to remain an important alternative when medical treatment fails to relieve their symptoms. Myomectomy is being performed increasingly for the treatment of fibroids in the patients who have not completed their families. Hysterectomy is the definitive treatment of fibroid. However, it is a major operation and is not without risk. With advancement in field of diagnosis and management there is a lot of rooms for improvement in our setting. Hysteroscopy, if employed can save the patients from undue diagnostic D & C, anaesthesia and its complications, as hysteroscopy is a valuable method for evaluation of intrauterine disorders like fibroid polyps and their management.

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