Frequency of Heavy Menstrual Bleeding in Patients with Uterine Fibroids

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ABSTRACT

Background: Uterine fibroids are the most common form of benign uterine tumors and cause severe menstrual bleeding pelvic pain, infertility, and pressure.Almost one-third of women with uterine fibroids seek treatment.
Objective: To determine the frequency of heavy menstrual bleeding in patients presenting with uterine fibroids.
Material and Methods: This cross sectional descriptive study was conducted in DHQ Hospital Timergara for six months, a total of 147 females presenting with uterine fibroids fulfilling the inclusion criteria were selected through a consecutive sampling technique. All the patients were subjected to ultrasound examination.
Results: The mean age recorded was 30.45±7.9. 37 (25.2%) patients were in the age group of 18 to 24 years, 51 (34.7%) patients were in the age group of 25 to 34 years and 59 (40.1%) patients were in the age group of 35 to 45 years. Frequency of HMB was 31.3%.
Conclusion: There was a high prevalence of heavy menstrual bleeding in patients presenting with uterine fibroids.
Keywords: Heavy Menstrual Bleeding; Uterine Fibroids

This article may be cited as: Tahir L, Amin S, Khan W, Khan M. Frequency of Heavy Menstrual Bleeding in Patients with Uterine Fibroids. J Saidu Med Coll Swat. 2022;12(1):07-10.DOI:https://doi.org/10.52206/jsmc.2022.12.1.702

INTRODUCTION

Uterine fibroid sometimes referred to as uterine leiomyoma is the most common type of benign, monoclonal tumor (consists of the smooth muscle of the myometrium) among women of childbearing age. Composition of myoma includes proteoglycan, fibronectin, and a huge amount of extracellular matrix[1]. Prevalence of Uterine fibroids fluctuate due to the methodology for diagnosis and the general population in different parts of the world. Uterine fibroids often create complications like abnormal menstrual bleeding, pelvic pressure, pregnancy complications, reproductive dysfunction, and pain. Symptomatic uterine fibroids have drastic effects on quality of life and pose an economic burden globally.25% of women with fibroids are symptomatic. By the use of ultrasound, it has been observed that the frequency of uterine fibroids is more frequent in black women (80%) as compared to white (70)[2-4]. According to statistics the prevalence of uterine fibroids is 60% in women of childbearing age[5,6]. Uterine fibroid is not often hazardous to invite medical intervention[7,8].

Among fibroids those protruding the uterine cavity are more often associated with heavy menstrual bleeding[9]. Heavy Menstrual Bleeding (HMB) is also known as menorrhagia. It is menstrual blood loss of an estimated =6080ml per cycle as compared to menstrual blood loss of 3040ml of average normal women. Uterine fibroids are generally related to heavy menstrual bleeding, however, the connection between the area and size of heavy bleeding and fibroids is not consistent[10]. The assessment shows that approximately 25% of women with uterine fibroids will encounter HMB[3]. The relationship between HMB and uterine fibroids involves degradation in the contractility of the myometrium, vessel dilation and enhancement in the surface area of the endometrium[11]. The notable alteration of blood flow in the myometrium is due to the presence of intramural fibroids in the uterus. Enhanced arterial vascularity and dilated venules manifest in the perifibroid myometrial zone[12].

Anemia due to severe blood loss associated with HMB is usually diagnosed by CBC. To confirm the presence of fibroids in the uterus ultrasonography and Magnetic Resonance Imaging (MRI) are effective diagnostic techniques. The treatment of uterine fibroids depends upon the location and size of fibroids in association with the patient's symptoms, age, and preservation of fertility. The aim of medications is to regulate the menstrual cycle and control bleeding.

MATERIAL AND METHODS

The cross sectional study was carried out after the approval of Hospital Ethical Committee (Diary no 3260|8F) at DHQ hospital Timergara,, Lower Dir. Patients falling in the age group of 18 to 45 years having uterine fibroids with related symptoms such as non-cyclic pelvic pain or pressure, constipation, dyspareunia or prolonged menstrual bleeding were included in the study. Patients already diagnosed with other causes of heavy

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Received: October 05th 2020 Accepted: October 21th 2021

menstrual bleeding such as polyps & endometrial hyperplasia and patients who had a hysterectomy were excluded from the study. In our study Heavy Menstrual Bleeding will be defined as extreme menstrual blood loss which effects the quality of life of women emotionally physically, socially and financially. Uterine fibroids will be defined as benign tumor growth of uterine smooth muscle occurring in the fundus or body of the uterus. All patients were subjected to ultrasonography for assessment of uterine fibroids. Ultrasound was performed by an experienced radiologist having five years of post MBBS, DMRD experience. The fibroids were seen as hypoechoic lesions of different sizes and shapes on ultrasonography examination.

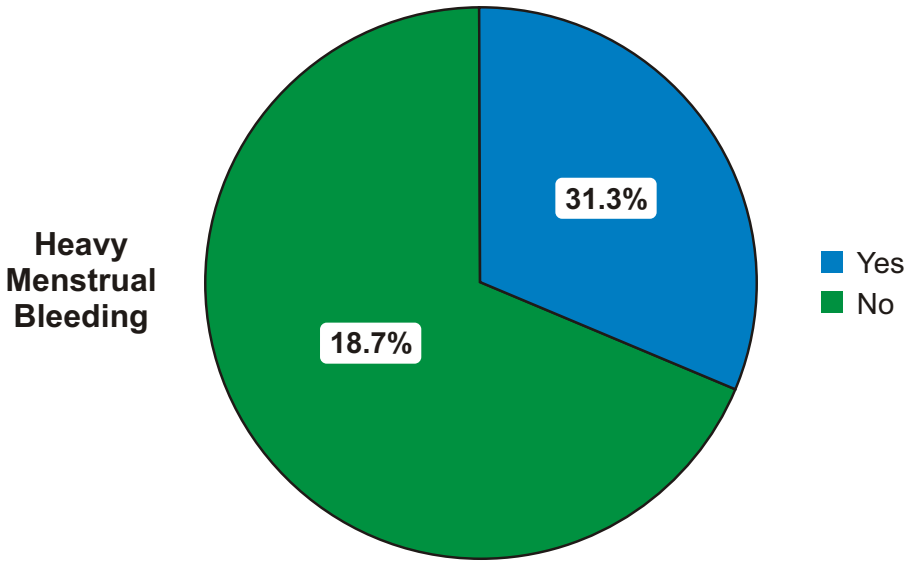
Information was taken for age and heavy bleeding on a specific proforma. Sample size was 147 using 25%[3] proportion of HMB in women with uterine fibroid in their reproductive age, 95 % confidence level, and 7% of margin of error by using WHO software for sample size determination.

SPSS Version 20 was used for data analysis. Frequency and percentages were calculated for uterus fibroids in association with heavy menstrual bleeding. Mean, and Standard Deviation was calculated for age.

RESULTS

This study was conducted on 147 patients of reproductive age group presenting with uterine fibroids. The mean age of the patients was 30.45, standard deviation was 7.9. Minimum age recorded was 18 and maximum age recorded was 45. In the age group of 18 to 24 years, there were 37 (25.2%) patients, 51 (34.7%) patients were in the age group of 25 to 34 years and 59 (40.1%) patients were recorded in the age group of 35 to 45 years.

Among 147 patients, the frequency of heavy menstrual bleeding was 46 (31.3%) while 101 (68.7%) patients had symptoms other than HMB.



In 46 patients presented with the HMB, 11 (23.9%) were from the age group of 18 to 24 years, 12 (26.1%) were from the age group of 25 to 34 years and 23 (50%) belonged to the age group of 35 to 45 years. (Table 1)

Table 1. HMB with age groups stratification

HMB	18 to 24	25 to 34	35 to 45	Total
Yes	11 (23.9%)	12 (26.1%)	23 (50%)	46
No	26 (25.7%)	39 (38.6%)	36 (35.6%)	101
Total	37 (25.2%)	51 (34.7%)	59 (40.1%)	147

DISCUSSION

Heavy menstrual bleeding and prolonged bleeding are the most common symptomatic manifestations of uterine fibroids. The heavy bleeding can cause serious health issues especially iron deficiency anemia. HMB can have a wide range of effects on quality of life of a woman. Apart from social disturbance, it can lead to financial burden due to frequent hospital visits and expenditure on treatment and medications.

Several studies have been conducted to form hypotheses for the primary biologic actions by which fibroids could cause heavy bleeding. Location ,number and size of fibroids have been assumed to decide the heavy bleeding. HMB is most likely to be caused by the submucous fibroids, those in or partly encroaching into the endometrial cavity[13]. A study was conducted evaluating premenopausal women presenting with heavy menstrual bleeding and those having not, it was found that women with abnormal vaginal bleeding were likely to have either intramural (58%) or submucous fibroids (21%) when compared to asymptomatic women[9].

In our study, the frequency of HMB in 147 uterine fibroids patients was 46 (31.3%). Since our study was mainly focussed on the frequency of HMB in fibroids patients, symptoms other than HMB were intentionally omitted from the analysis.

Our study showed that the age group of 35 to 45 had a high higher prevalence of heavy menstrual bleeding which was 23 (50%). A descriptive cross sectional study conducted by Wegienka G et al[14] showed that out of 910 women aged 35 to 49 years were screened for fibroids, 564 had fibroids detected on ultrasound examination. The study concluded that women with fibroids were highly likely to report gushing of blood than those without fibroids. Another aforementioned type of study conducted by Tsiligiannis S et al[15] shows similar results, 5 out of 6 patients aged 34 to 50 presenting with uterine fibroids had heavy menstrual bleeding. A study conducted in Pakistan showed that the frequency of irregular menstrual cycles with heavy bleeding in women having mean maternal age of 46 presenting with uterine fibroids was 38.9%[17]. Another study conducted in Pakistan showed that among the clinical presentations of 441 patients having uterine fibroids, abnormal menstrual bleeding had the highest frequency 74.1%[18].

Patients presenting with symptomatic uterine fibroids complaining of heavy menstrual bleeding should be examined in detail for proper management. Surgical and medical treatments are available for treatment of fibroids. Medical treatments include hormonal therapies and surgical approach includes hysterectomy and myomectomy as first choice. Treatment of fibroids depends upon various factors such as planned future pregnancy, uterine preservation and severity of symptoms.

CONCLUSION

The present study would sum up that there is a high prevalence of HMB in patients of symptomatic uterine fibroids. Proper counselling of the patient is required in managing the fibroids surgically or medically.

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DATA SHARING STATEMENT: The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

CONFLICT OF INTEREST: Authors declared no conflict of interest.
GRANTED SUPPORT AND FINANCIAL DISCLOSURE: Nil

AUTHOR'S CONTRIBUTION
The following authors full fill authorship criteria as per ICMJE guidelines;

Tahir L:	Idea conception, drafting the work, final approval, agreed to be accountable for all the work.
Amin S:	Design of the work, data acquisition, critical rivision, final approval, agreed to be accountable for all the work.
Khan W:	Data analysis, drafting of the work, final approval, agreed to be accountable for all the work.
Khan M:	Data interpretation, critical rivision, final approval, agreed to be accountable for all the work.