

A STUDY ON RISK FACTORS AND SEVERITY OF SYMPTOMS ASSOCIATED WITH UTERINE FIBROIDS

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ABSTRACT

Objectives: A study to determine the frequency of associated risk variables of Uterine fibroids. To assess the symptom severity experienced by the women. **Methodology:** After obtaining approval from the AIPBS College Research Committee and Ethics Committee for Biomedical and Health Research, Adesh University. The research was carried out at Bathinda's Adesh Hospital, with a total of 130 women for six months. Validated Questionnaire were used to record the data. The information collected was examined in accordance with the study's goal. Patients who met the criteria had to undergo a transvaginal ultrasound. **Results:** There were 130 women enrolled in all. Age groups between 36 and 50 years, overweight women, menstrual flow lasting five to seven days, metrorrhagia(irregular periods), dysmenorrhea(menstrual cramps), menarche age between 11 and 13 years, multiparous women, and non-vegetarian diets were identified as risk factors for uterine fibroids. It didn't seem like other factors mentioned were significant. It was determined that the majority of patients had moderate symptoms.

KEYWORDS: Uterine fibroids, Risk factors, Overweight women, Menstrual flow.

INTRODUCTION

The most frequent pelvic tumours in women are uterine fibroids, benign tumours of the uterus (also known as myomas or leiomyomas). Contrary to their name, fibroids generally consist of myocytes instead of fibroblasts and are distinguished by an excessive accumulation

of extracellular matrix materials, primarily collagen, within the tumour. In addition to Heavy Menstrual Bleeding, the mass growth of this incredibly dense tissue results in an enlarged and disproportionate uterus and some of the major symptoms of uterine fibroids, including pressure feelings, abdominal pain, and infertility. Uterine smooth muscle cells, or myometrium, are the source of fibroids. Their growth is mostly influenced by the amount of estrogen that is in the blood. There remains much to learn about the pathophysiology of fibroids. In imaging, fibroids can occur incidentally and show no symptoms, or they might show symptoms. In general, uterine fibroids are observed in three main locations: submucosal (within the uterine cavity), intramural (inside the myometrium), and subserosal (outside the uterus). Pedunculated or not can be further divided into them. Ultrasound imaging has a high selectivity for this condition and is the standard means of diagnosing fibroids.

Previous research has identified a number of risk factors for fibroids, including age, decreased fertility, frequent alcohol and caffeine use, obesity, consumption of red meat, hypertension, diabetes mellitus, a history of pelvic inflammatory illness, and genetics. During their reproductive years, most women will experience the development of one or more uterine fibroids. Fibroids are a common disease that can lead to abnormal uterine bleeding, pelvic pain or pressure, and may have reproductive consequences on infertility and unfavourable pregnancy outcomes. The most typical presenting symptom is heavy menstrual bleeding, which can result in anaemia, tiredness, and painful periods. Other signs of leiomyomas include non-cyclical discomfort, abdominal protuberance, bladder or bowel malfunction leading to urinary incontinence or retention, pain, or constipation. Heavy monthly bleeding is one of the primary causes of uterine fibroids, a condition that significantly lowers patients' quality of life. The fact that many women need definitive surgical care after exhausting all medical management alternatives highlights the fact that none of the currently available therapeutic methods, with the exception of hysterectomy, adequately tackles this issue.

MATERIAL AND METHODS

The AIPBS College Research Committee and the Ethics Committee for Biomedical and Health Research, Adesh university gave their clearance for this hospital-based prospective observational study. The research is being carried out in the Department of Obstetrics & Gynaecology, Adesh Hospital, Bathinda. Prior to the subject's inclusion in the study, written consent was obtained in the languages of Hindi, Punjabi, and English that they are familiar with.

Women's demographic information, risk factors, and symptom severity were gathered from the Department of Obstetrics and Gynaecology using a validated questionnaire.

I. Sample size

Duration based study.

II. Study duration

This study was conducted for a period of six months.

III. Selection Criteria

Selection of the study participants was done based on inclusion and exclusion criteria.

a) Inclusion criteria

- Patients diagnosed with Uterine Fibroids
- Patients with age group 21-65 years were included in this study.

b) Exclusion criteria

- Who had been treated for uterine fibroids with following surgical procedures (Hysterectomy, Myomectomy & Uterine Fibroid Embolization).
- Pregnant and lactating women.

IV. Method of data collection

A validated questionnaire form was used to gather the data. An interview schedule that was conducted at the institute with help from faculty members and other specialists served as the data collection method for the study. The chosen individuals were assured of the confidentiality of their data and given a clear explanation of the study's goal and questionnaire contents prior to distribution. The women who visited the obstetrics and gynaecology department were the chosen subjects. Patients who agreed to participate in the trial were asked to sign a written consent form.

V. Statistical Analysis of data

All the data was recorded and analysed using IBM SPSS version 22.0[®] where frequency and descriptive analytics test was applied.

RESULTS



Figure 1: Assessment of risk factors using Validated questionnaire.

I. Data evaluation on basis of demographic details of patient

- **Age:** Uterine fibroids were mostly found in age group between 36-50 years (80.8%) followed by 21-35 years (13.8%) and then 51-65 years (5.4%).

Thus, the age group between 36-50years shows more prevalence of uterine fibroids in women.

Table 1: Distribution according to age.

Age	Frequency	Percent	Valid Percent
21-35 yr	18	13.8	13.8
36-50 yr	105	80.8	80.8
51-65 yr	7	5.4	5.4
Total	130	100.0	100.0

- **BMI:** In a sample of 130 participants, 36.2% (47) of the subjects were overweight women, who had a higher incidence of uterine fibroids. Normal women had 29.2%(38); underweight women had 19.2%(25); while obese women made up 15.4% (20).
- **Family history of fibroids:** Out of 130 women, 32 (24.6%) women had positive family

history of uterine fibroids and 98 (75.4%) women do not have family history of uterine fibroids.

- Hence, in Bathinda region, women with positive history of uterine fibroids were less susceptible, in comparison to women with negative history of uterine fibroids.

II. Data evaluation according to risk factors

- **Duration of menstrual cycle:** In a total of 130 women, 47 (36.2%) had menstrual flow for five to seven days, 32 (24.6%) for more than seven days, 29 (22.3%) for three to five days, 18 (13.8%) for two to three days, and 4 (3.1%) i.e women with menopause had no menstrual flow.

Hence, women having menstrual flow for 5-7 days were more likely to have uterine fibroids.

- **Menorrhagia (Regulars periods with abnormal bleeding):** Based on these parameters, 77 (59.2%) of the 130 women had irregular periods with abnormal bleeding, 50 (38.5%) had regular periods with abnormal bleeding, and 3 (2.3%) did not have periods. Thus, this criteria states that most of the women are undergoing through irregular periods.
- **Metrorrhagia (Irregular periods with abnormal bleeding):** According to this condition, Out of 130 women, 75 (57.7%) women were having irregular periods with abnormal bleeding, 52 (40%) women were not facing the condition of metrorrhagia, 3 (2.3%) were not having periods.

Hence, it states that most of the women were suffering from metrorrhagia.

Table 2: Distribution according to metrorrhagia.

Metrorrhagia	Frequency	Percent	Valid Percent
No	52	40.0	40.0
Yes	75	57.7	57.7
Menopause(nil)	3	2.3	2.3
Total	130	100.0	100.0

- **Age at menarche:** Of the 130 women, 73 (56.2%) experienced their menarche between the ages of 11 and 13, 38 (29.2%) between the ages of 13 and 15, and 19 (14.6%) between the ages of 15 and 17.

Thus, it may be concluded that women were more likely to have uterine fibroids in the 11–13 age range.

• Parity

1. Multiparity: Of the 130 women, 107(82.3%) women were multiparous, while 11 (8.5%)

women were not multiparous and 12 (9.2%) women were unmarried.

2. Nulliparity: 110(84.6%) women were not nulliparous, 8 (6.2%) women were found to be nulliparous and 12 (9.2%) women were unmarried.

Thus, according to this factor, multiparous women were more prone to occurrence of fibroids as compared to nulliparous women.

- **Dysmenorrhea (Menstrual cramps):** Based on this condition, 73 (56.2%) of the 130 women reported having monthly cramps, 54 (41.5%) reported not having cramps, and 3 (2.3%) that is menopause women reported not having periods.

Therefore, dysmenorrhea indicates a higher frequency of fibroids in females.

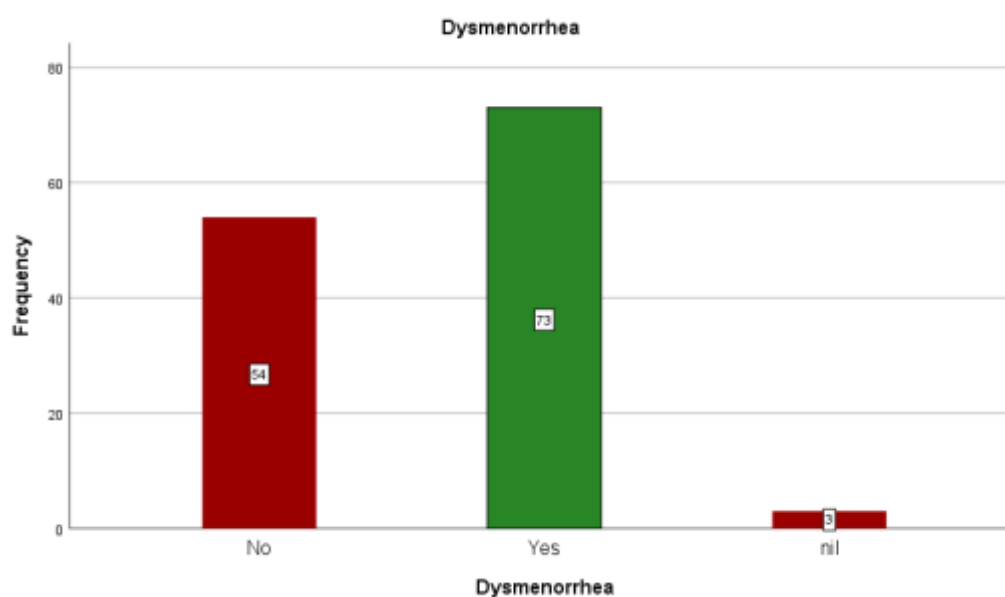


Figure 2: Distribution according to Dysmenorrhea.

- **Diet:** Based on this criteria, 66 (50.8%) of the 130 women were non-vegetarian, 50 (38.5%) were vegetarian, and 14 (10.8%) were eggitarian. Therefore, the risk of uterine fibroids was higher in non-vegetarian women.

III. Analysis of symptom severity

Table 3: Analysis of symptom severity.

	Total	Minimum	Maximum	Mean
Heavy bleeding during menstrual period	130	1.00	4.00	3.2923
Passing blood clots during menstrual period	130	1.00	4.00	3.3308
Fluctuation in two consecutive periods	130	1.00	4.00	2.6615
Fluctuation in two consecutive monthly cycle	130	1.00	4.00	2.5538
Feeling pressure in pelvic area	130	1.00	4.00	2.2769

Frequent urination during daytime	130	1.00	4.00	2.0538
Frequent urination during night time	130	1.00	4.00	1.9000
Feeling fatigued	130	1.00	4.00	2.0769
Average severity	130	1.00	3.75	2.5183
N (listwise)	130			

The mean of severity of symptoms is 2.51. So, severity of symptoms in majority of patients was found to be moderate.

DISCUSSION

Leiomyomas, commonly known as uterine fibroids, are growths consisting of muscle and tissue that develop in or on the uterine wall. These tumours are the most prevalent noncancerous tumour in women and are often benign (not malignant). Numerous symptoms, including pain and irregular vaginal bleeding, are brought on by uterine fibroids. Sometimes a person with fibroids is completely symptom-free and unaware of it. Patient symptoms will typically determine how to treat fibroids.

According to the patient's demographic information, uterine fibroids were more common in women between the ages of 36 and 50. Furthermore, it was believed that obese women were more likely to develop fibroids. While a family history of fibroids did not appear to be a major risk factor, elevated BMI has a greater influence on the incidence of fibroids.

The major risk factors of uterine fibroids: non-vegetarian diet, early age at menarche (11–13 years), metrorrhagia, menorrhagia, and dysmenorrhea. Moreover, there is a correlation between the occurrence of fibroids and multiparous women. Other risk factors that were mentioned didn't appear to be significant.

CONCLUSION

One hundred and thirty people participated in a prospective, observational study, and most of them showed reasonable behaviour. The majority of the women belonged to the age range of 36 to 50. Women who were overweight and more prone to fibroids made up the bulk of the subjects. It was discovered that there was no substantial risk factor associated with family history. For women with Uterine Fibroids, the duration most affected was the menstrual cycle, lasting five to seven days. Metrorrhagia affected the majority of the participants. Most of the participants in our study reported having dysmenorrhea. The majority of the participants experienced irregular menstruation accompanied by increased bleeding, or menorrhagia. One major risk factor for women with UF is thought to be their early menarche

age (11–13 years old). The majority of those impacted were multiparous women. As a major risk factor, nulliparity was not found. There was a higher risk of uterine leiomyomas in women who did not follow a vegetarian diet.

The majority of women were reported to have moderate symptoms that were (abnormal uterine bleeding, pelvic pain, frequent urination).

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