



Association between the Risk Factors and Uterine Fibroids in Reproductive Age Group in Mosul City

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Abstract: The benign tumours known as uterine fibroids (UF), commonly referred to as myomas, develop from the uterus' smooth muscle cells. Age, race, parity, obesity, vitamin D deficiency, and hypertension that are associated. The major goal of the current study is to identify risk factors associated with uterine fibroid among women in Mosul City. the a non-experimental, descriptive cross – sectional study design to accomplish the objectives of the study for the period extended from 16 December, 2022 to the 20 March, 2023 at four hospitals in Mosul city. The P-value for Menarche Age Group was 0.012, Family History of UF was 0.049, Subfertility type was 0.035, and for PCOS was 0.011. The study concluded there are association between uterine fibroids and menarche age, family history, subfertility type, and polycystic ovarian syndrome. The study suggests routine ultrasound scanning in women of reproductive age in order to diagnose them quickly and avoid the related complications.

Key words: Mosul City.

INTRODUCTION

Uterine fibroids (UF) are benign tumours that develop from the smooth muscle cells of the uterus and are also referred to as myomas. Menorrhagia, pelvic pain, infertility, and pregnancy difficulties are examples of clinical symptoms; the most frequent reason for hysterectomy is symptomatic UF [1].

Between 1990 and 2019, the age-standardized incidence rate of UL grew significantly over the world, going from 225.67 to 241.18 per 100,000 women. [2]. Because it is frequently asymptomatic and discovered by accident during an examination or surgery, the prevalence of UF in the general population is likely to be underestimated [3]. In a study on ultrasound screening, the proportions of self-reported and newly diagnosed UF in premenopausal women in the US were 35% and 51%, respectively. [4]. African-Americans are more likely than people of other races to develop UF, and the incidence of the condition rises with age until menopause. UF are believed to have a genetic base and to be regulated by hormones and growth factors, despite the fact that the cause is still largely unclear [5]. Reproductive variables, such as early menarche and null parity, are known UF risk factors, while lifestyle factors including obesity and alcohol consumption may further increase the chance of UF [6].

In particular, premenopausal women and those under 40 years of age are at a higher risk of developing uterine fibroids as they get older [7]. For instance, 60% of African American women aged 35 to 49 reported having uterine fibroids, compared to 80% of those under the age of 50. In White women under the age of 35 and in White women over the age of 50, uterine fibroids formed in 40% and 70% of cases, respectively [8]. Prepubescent girls have not had these tumours found, and only infrequent examples of adolescent patients have been documented. However, it is unknown what conditions led to their rapid development at such a young age. Populations of various races and ethnicities have varying rates of uterine fibroids. Uterine fibroids are 3 times more common in African American women and 2 times more common in Hispanic women compared with White women. Additionally, vitamin D insufficiency in African American women may be the cause of the link between uterine fibroids and more severe disease symptoms [11]. When compared to other racial and ethnic groups in the US, African Americans population have the highest prevalence of obesity, which raises their chance of acquiring uterine fibroids [10].

METHOD

1. Ethical Considerations:

The University of Mosul's Nursing College provided ethical approval for the study's execution, in addition to, the collegiate committee for medical research ethics at the university of Mosul.

2. Study Design:

The study is a non-experimental, descriptive cross – sectional study design to accomplish the objectives of the study for the period extended from 16 December, 2022 to the 20 March, 2023 at four hospitals in Mosul city.

3. Setting of the Study:

The study was conducted on four hospitals in Al-Mosul, the capital of the Nineveh Governorate, which is located in northern of Iraq.

4. Study Sample:

According to the inclusion and exclusion criteria, a non-probability sample of (188) women with uterine fibroids was purposefully chosen.

5. Data Collection Methods:

The data collection tool used in this study was a structured questionnaire form. The questionnaire was designed in Arabic and then translated into English. It consisted of six parts and was designed based on a literature review, experience, and previous research. The data was collected from each participant by direct interview after taking her verbal consent, and some information was obtained from women's records. To complete the data collection, each participant needed roughly (15–20) minutes.

6. Validity:

Validation of the tool of the study was performed to provide confidence in the results through a panel of seventeen experts was chosen from different specialties to examine content validity for clarity, relevance, and applicability of it.

7. Reliability of the Study Instrument:

The reliability test was done to measure the errors in the measurement technique, therefore each instrument used in this study was assessed by statistical analysis. Pearson Correlation coefficients were computed to measure the reliability of the study tools throughout the application of the Test-

retest reliability coefficients (or called coefficients of stability) which was of high reliability at r value = (0.83) that was significant at ($P < 0.05$) level. And this means that the tools are stable and reliable.

8. Statistical Data Analysis:

In this study, SPSS software version 26 and Microsoft Excel were used for the statistical analysis of the data. Descriptive stats included frequency, percentage, mean and standard deviation. Fisher's exact test was used for categorical variables and Phi-correlation to find relationships between variables. A statistician was hired to analyze study results

RESULTS

The table (1) presents the frequencies and percentages of UF cases in relation to different variables, including submucosal, intramural, pedunculated, and subserosal fibroids, as well as the corresponding p-values. Three categories for menarche age were used: ≤ 10 yrs, 11-14 yrs, and ≥ 15 yrs. The data indicates that a menarche age group of ≤ 10 years had a frequency of 2 (7.1%) for submucosal fibroids, 19 (17%) for intramural fibroids, 5 (19.2%) for pedunculated fibroids, and 2 (9.1%) for subserosal fibroids, with a statistically significant p-value of 0.012.

Table (1): Association between the risk factors and uterine fibroids.

Variables		Submucosal		Intramural		Pedunculated		Subserosal		P-value
		F.	%	F.	%	F.	%	F.	%	
Menarche Age Group	≤ 10 Years	2	7.1	19	17	5	19.2	2	9.1	0.012
	11-14 Years	21	75	70	62.5	9	34.6	18	81.8	
	≥ 15 Years	5	17.9	23	20.5	12	46.2	2	9.1	
Family History of UF	No	19	67.9	55	49.1	12	46.2	14	63.6	0.049
	Mother	5	17.9	17	15.2	9	34.6	4	18.2	
	Sister	4	14.3	40	35.7	5	19.2	4	18.2	
Subfertility type	Non	23	82.1	80	71.4	18	69.2	10	45.5	0.035
	Primary	4	14.3	23	20.5	3	11.5	6	27.3	
	Secondary	1	3.6	9	8	5	19.2	6	27.3	
PCOS	No	19	67.9	96	85.7	22	84.6	13	59.1	0.011
	Yes	9	32.1	16	14.3	4	15.4	9	40.9	

** UF: uterine fibroid, PCOS: polycystic ovarian syndrome, F: frequency, %: percentage

DISCUSSION

The current study in Table (1) shows The menarche age was categorized into three groups: ≤ 10 years, 11-14 years, and ≥ 15 years. The data indicates that a menarche age group of ≤ 10 years had a frequency of 2 (7.1%) for submucosal fibroids, 19 (17%) for intramural fibroids, 5 (19.2%) for pedunculated fibroids, and 2 (9.1%) for subserosal fibroids, with a statistically significant p-value of 0.012. Similarly, the presence of a family history of UF showed different frequencies and percentages across different categories (no family history, mother, and sister), with a statistically significant p-value of 0.049. The subfertility type and the presence of polycystic ovarian syndrome (PCOS) also displayed significant associations with the occurrence of UF, as indicated by their respective p-values of 0.035 and 0.011. These findings highlight the potential influence of these variables on the

development of UF and suggest the need for further investigation. this study is consistent with the a study [9].

CONCLUSIONS

Several risk factors for UFs among women in Mosul city are clarified by this study's conclusion. The findings imply that women with PCOS, obesity, and a family history of UFs are significant risk factors that may raise UF risk in women.

ETHICAL CONSIDERATIONS COMPLIANCE WITH ETHICAL GUIDELINES

Approvals were obtained from an ethical committee from the University of Mosul/College of Nursing, the Nineveh Health Department.

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AUTHOR'S CONTRIBUTIONS

All authors contributed to the study concept, writing, and reviewing of the final edition.

DISCLOSURE STATEMENT

The authors declare no conflicts of interest

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