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Health Outcomes for Women Patients Related to Uterine Myomas

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Abstract: **Background**: Uterine myomas are the most prevalent benign pelvic tumours among women, with an estimated prevalence of 60% during a woman's lifetime. Objective: This study was interested in determining health findings for female patients who have uterine myomas. Patients and methods: A data study was conducted on women patients with uterine myomas, which included 70 patients who were examined in outpatient units of private clinics or public hospitals in Iraq, which includes all data collected from gynecological diagnostic data, where patient data and the number of visits were collected during the 7-month follow-up. Which included demographic and diagnostic data, surgical data, and risk factors associated with myoma. This study was conducted during a period ranging from March 6, 2022, to October 18, 2023. **Results**: The study found that women in the age range of 40 to 45 years constituted the largest proportion of cases, with 35 cases. The age group of childbearing age was found to be 62.86%, while the perimenopausal age group accounted for 34.29% and the postmenopausal age group for 2%. The most prevalent symptoms were heavy menstrual bleeding (56 cases), pelvic pain (39 cases), and dysmenorrhoea (30 cases). The types of myomas included submucosal (16 cases), intramural (23 cases), subserosal (21 cases), and other (5 cases). The most common localisations of the myomas were anterior (25 cases). A total of 21 cases of fundus and 14 cases of posterior were identified. The surgical procedures included laparotomic myomectomy (13 cases), laparoscopic myomectomy (5 cases), hysteroscopic myomectomy (5 cases), hysterectomy (22 cases), and other surgical options (3 cases). The median blood loss was 178 mL. The mean ± standard deviation for the number of women experiencing bleeding was 12 ± 10.72. Eight women were admitted to the intensive care unit (ICU), and the mean length of stay in the hospital was 3.20 ± 0.46 days. The most common complications in women with uterine myomas were infection (6 cases), bleeding (2 cases), adhesions (2 cases), and death (4 cases). Conclusion: The study found common symptoms in women with uterine myoma, include heavy menstrual bleeding, pelvic pain, and dysmenorrhea, leading to poor quality of life. In Iraq, surgical intervention is the primary treatment, emphasizing the importance of both non-surgical and surgical therapies in improving symptoms and quality of life.

Keywords: Uterine myomas; Heavy menstrual bleeding; Pelvic pain, and Dysmenorrhea

INTRODUCTION

Uterine myomas are the most common benign pelvic tumors among women (Okolo, S., 2008). Their prevalence depends on age, race, and diagnostic method, but it is estimated that they occur in 20-50% of women of reproductive age (Pérez-López, F. R.,*et al.*,2014). It is described that by the age of 50, more than 70% of white women have suffered from this pathology (Stewart, E. A., *et al.*, 2017). They correspond to non-cancerous monoclonal tumors arising from smooth muscle cells and fibroblasts of the myometrium (Borah, B. J., *et al.*, 2013).

The exact etiology of uterine myomas is unknown; however, some studies have identified the presence of some cytogenetic abnormalities. Particularly deletions on chromosome 7 (which have been found in more than 50% of the organs studied) (Parker, W. H., 2007). It is well established that its growth occurs only in premenopausal women, which decreases in hypoestrogenic states such as menopause or with the administration of gonadotrophin-releasing hormone (GnRH) agonist therapy.

Its prevalence is closely related to changes in the cycle of reproductive hormones estrogen and progesterone (Nelson, A. L., & Ritchie, J. J., 2015), reaching an incidence between 20% and 40% at reproductive age, being maximum at this stage of life (Spies, J. B.,2002). Most uterine myomas are asymptomatic, but sometimes they can be associated with pelvic symptoms, including heavy or prolonged menstrual bleeding, pelvic pain and/or pressure, and reproductive effects such as infertility or spontaneous abortions (Donnez, J., & Dolmans, M. M., 2016). It is important to note that these symptoms are closely related to the number, size, and location of fibroids (Sparic, R., 2016).

The diagnosis is based on a suggestive clinical history and an initial clinical evaluation, which consists of an abdominal and gynecological physical examination in addition to ultrasound findings consistent with uterine myomas. In the face of an enlarged uterus, possible differential diagnoses associated with age, risk factors, and comorbidities should always be taken into account

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(Lumsden, M. A., *et al.*, 2015; Brito, L. G. O., *et al.*,2014). Pregnancy should be excluded in all women of reproductive age, endometrial lesions such as polyps, endometrial hyperplasia, or carcinoma and myometrial lesions such as uterine adenomyosis and leiomyomas (Borah, B. J., *et al.*, 2013), which in some cases could be considered giant (Williams, V. S., *et al.*, 2006; Downes, E., *et al.*, 2010; Munro, M. G., *et al.*, 2011; Badia, X., *et al.*, 1999). The latter represents a high therapeutic challenge for the medical team due to their surgical approach since it causes important variations in the distribution of the intra-abdominal organs. Therefore, the correct diagnosis of the pathology is of the utmost importance to carry out timely and adequate management. It should be mentioned that large leiomyomas are a benign condition that is estimated to have a very low incidence (Donnez, J., & Dolmans, M. M., 2016). In fact, there are currently no official epidemiological records on their prevalence at the national or international level. (Luoto, R., *et al.*, 2000)

On the other hand, the need for medical and/or surgical treatment is essential to evaluate since fibroids are an important source of gynecological morbidity (Terry, K. L., *et al.*, 2010). For the symptomatic management of uterine myomas, the use of non-steroidal anti-inflammatory drugs and oral contraceptives are widely used (Sparic, R., *et al.*, 2016; Lumsden, M. A., *et al.*, 2015; Britt, K., & Short, R., 2012). Among the most effective medical interventions, the use of GnRH analogues and ulipristal acetate as a preoperative treatment to reduce the size of the fibroid has been described (Pérez-López, F. R., *et al.*, 2014; Gupta, S., *et al.*, 2008), as proposed by Jacques Donnez, Janusz Tomaszewski, *et al.*, for the Pearl II Study Group (Somigliana, E.,*et al.*, 2007).

PATIENTS AND METHODS

This cross-sectional study was conducted at Iraqi outpatient clinics and government hospitals from 6 March 2022 to 18 October 2023, with the main focus being on the clinical presentation of symptomatic myomas in Iraqi women as perceived by Iraqi Gynecologists.

Other objectives included evaluating the impact of symptoms on patients' quality of life, the time between programming and surgical intervention, the percentage and type of fibroids that underwent surgery, the frequency of various risk factors associated with uterine fibroids, and finally, the patient's level of readiness for surgical intervention. Data were gathered in consultations in two consecutive visits, the baseline visit as well as the follow-up visit, in accordance with standard clinical practice. The patient carried out the informed consent form upon learning about the trial during the baseline appointment. The doctor obtained a record of all regions, in a patient's data-collecting booklet, from the Gynecologists' obstetric and gynecological history as well as evaluation of the current episode consisting of myoma characteristics (as per ultrasound and ultrasound findings), existing symptoms, and former therapies.

The patient filled out a form for specific manifestations as well as personal wellness status ranging from their way of life to their habits. The Gynaecologist did not only write down the choice of method, the dates intended for such actions, and its necessity, but also the strategy to cure it. The Gynaecologist collected data on the overall development of the patient, the treatment regimen, and whether surgery was performed at the seven-month post-intervention visit. The characteristics associated with myomas were reevaluated in those not undergoing surgery. An update on quality of life, general health and related symptomatology was given by the patient.

RESULTS

Table 1: Baseline and demographic characteristics findings of women with uterine myomas.

Characteristics	Number of patients [n = 70]	Percentage [%]
Age		
25 – 30	14	20%
31 – 35	21	30%
40 – 45	35	50%
BMI, n (%)		
<25	42	60%
25–30	21	30%
>30	7	10%
Comorbidities		

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Yes	25	35.71%
No	45	64.29%
Asthma	3	4.29%
Diabetes	6	8.57%
HIV	4	5.71%
Kidney diseases	2	2.86%
Hypertension	10	14.29%
Smoking status, n (%)		
Yes	14	20%
No	56	80%
Current gynecological status, n (%)		
Childbearing age	44	62.86%
Perimenopausal	24	34.29%
Postmenopausal	2	2.86%
Parity, (mean ± SD)		
Term deliveries	1.24 ± 1.10	
Pre-term deliveries	0.074 ± 0.30	
Abortions	0.36 ± 0.54	
Educational level		
Primary	8	11.43%
Secondary	20	28.57%
College/university	42	60.0%
Occupation		
Housewife	18	25.71%
Student	11	15.71%
Employment	41	58.57%
Income level, n (%)		
< 500 $	42	60%
> 500 $	28	40%

Table 2: A description of uterine myomas based on transvaginal sonography/ultrasound.

Characteristics	Number of patients [n = 70]	Percentage [%]
Number of myomas, n (%)		
1	33	47.14%
2	12	17.14%
3	10	14.29%
4	7	10.0%
≥ 5	3	4.29%
Type of myomaa, n (%)		
Submucosal	**16**	**22.86%**
Intracavitary pedunculated (Type 0)	4	5.71%
<50% intramural (Type 1)	8	11.43%
≥ 50% intramural (Type 2)	10	14.29%
Intramural	**23**	**32.86%**
Endometrial contact (Type 3)	7	10.00%
Intramural (Type 4)	16	22.86%
Subserosal	**21**	**30.0%**
≥ 50% intramural (Type 5)	12	17.14%
<50% intramural (Type 6)	15	21.43%
Pedunculated (Type 7)	3	4.29%
Other	**5**	**7.14%**
Submucosal and subserosal (Type 2–5)	3	4.29%
Other (Type 8)	2	2.86%
Localization of the myomas, n (%)		

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Posterior	14	20.0%
Anterior	25	35.71%
Fundus	21	30.0%
Lateral left	4	5.71%
Lateral right	1	1.43%

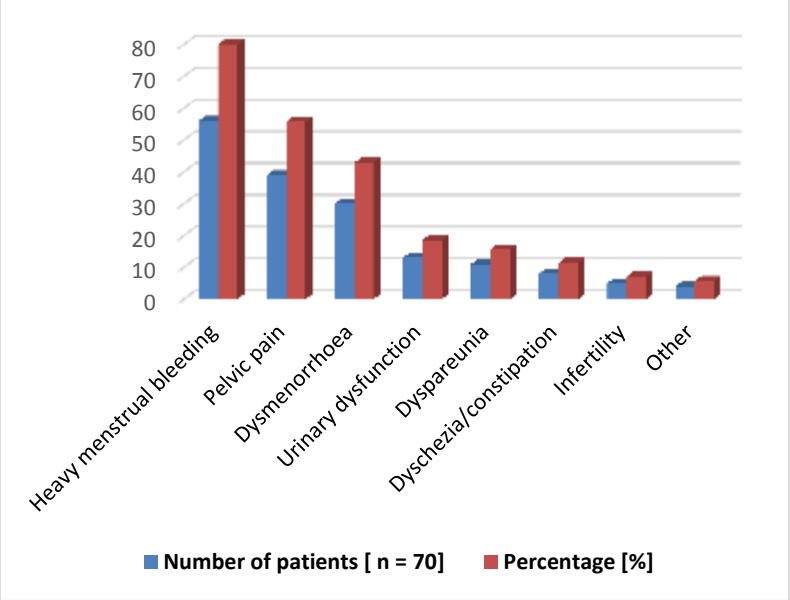

Figure 1: Determine the main symptoms prevalence in women with uterine myomas.

Table 3: Identify surgical findings of women with uterine myomas.

Items	**Number of patients [n]**	**Percentage [%]**
Types of surgeries		
Laparotomic myomectomy	13	18.57%
Laparoscopic myomectomy	5	7.14%
Hysteroscopic myomectomy	27	38.57%
Hysterectomy	22	31.43%
Other surgical options	3	4.29%
Blood loss, mL	178.58 ± 10.72	
Bleeding rate, n (%)		
Yes	12	17.14%
No	58	82.86%
Admission ICU, n (%)		
Yes	8	11.43%
No	62	88.57%
Length of stay in hospital, days (mean ± SD)	3.20 ± 0.46	
Complications	11	15.71%
Infection	6	8.57%
Bleeding	2	2.86%
Adhesions	2	2.86%
Damage to surrounding organs	0	0.0%
Recurrence of myomas	1	1.43%
Satisfaction rate		
Excellent	31	44.29%
Good	14	20.0%
Moderate	13	18.57%
Mortality rate, n (%)		
Yes	4	5.71%
No	66	94.29%

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Table 4: Assessment of quality of life for women with uterine myomas by UFS-QoL scale.

Items	UFS-QoL scale
Global	72.56 ± 12.43
Concern	77.89 ± 17.65
Activities	84.43 ± 10.44
Energy/mood	72.21 ± 11.06
Control	75.25 ± 9.19
Self-conscious	74.87 ± 12.90
Sexual function	82.54 ± 8.86

Table 5: Determine the number of removed myomas according to surgery and type of myoma.

Myomectomy			
Items	**Laparotomy**	**Laparoscopy**	**Hysteroscopy**
Submucosal	4 (5.71%)	1 (1.43%)	34 (48.57%)
Intramural	9 (12.86%)	3 (4.29%)	11 (15.71%)
Subserosal	14 (20%)	4 (5.71%)	8 (11.43%)
Other	15 (21.43%)	6 (8.57%)	5 (7.14%)

DISCUSSION

According to our research, French women who indicate with symptomatic uterine myomas frequently suffer from between one and three myomas, the majority of those being intramural and subserosal, and are of reproductive age with a history of myomatosis episodes. Three of the most commonly reported symptoms were dysmenorrhea, pelvic or abdominal discomfort, and excessive menstrual flow. In both operative and non-operated groups, the intervention led to a significant reduction in the degree of severity of symptoms. Both operative and non-operative patients' quality of life considerably improved between the time of diagnosis and inclusion and the follow-up visit seven months later. For most of patients, surgery was suggested, and it often took place within three months. The operation which occurred most commonly was myomectomy, in all of its variations, followed by hysterectomy.

According to a 2014 study on epidemiology, 18.8% of German women over the age of 18 were found to have uterine myomas, but an additional 19.1% suffered unexplained bleeding symptoms (Munro, M. G., *et al.*, 2011). A favorable relationship has been found between nulliparity or BMI 30 and myoma volume. Ovarian myomas, as well as obesity, have frequently been positively associated, perhaps because obese women have higher amounts of free-circulation estrogens (Luoto, R., Kaprio, J., *et al.*, 2000). Likewise, a previous study found that a growing number of term births reduced the incidence of myoma (Terry, K. L., *et al.*, 2010). In general, nulliparity has been associated to a higher incidence for reproductive diseases, including uterine, ovarian, and breast malignancies. Contraception may be able to prevent this risk because it has been proposed that it is linked to a greater frequency of ovulatory cycles (Gupta, S., *et al.*, 2008; Somigliana, E., *et al.*, 2007; Martín-Merino, E., *et al.*, 2015).

Previous studies have confirmed the clinical importance of myoma size and the statistically significant connection between myoma volume as well as symptom severity (Terry, K. L., *et al.*, 2010; Jacobson, G. F., *et al.*, 2007). A statistically significant correlation has been found between the size of the myomas and the quality of life, indicating that the treatment strategy should target both reducing the myomas and managing bleeding. Interestingly, there was a statistically significant negative correlation observed between the size of the myomas and the bleeding and dysmenorrhea, indicating that larger myomas are not always associated with excessive bleeding and concomitant discomfort. Submucosal myomas, which are the smallest, were shown to have greater rates of major bleeding, as indicated by the location sub-analysis (Vignini, A., *et al.*, 2017).

Although hysterectomy was the most common treatment in uterine myomas until recently (Britt, K., & Short, R., 2012), there are currently presently alternatives (Pejic, S., *et al.*, 2006). It has been observed that there has been a propensity toward fewer hysterectomies conducted in favor of less invasive surgical as well as surgical alternatives such as myomectomy, endometrial ablation, or uterine artery embolization (El Andaloussi, A.,*et al.*, 2017). Our research revealed that roughly equal amounts of patients have hysteroscopic and laparoscopic myomectomy and

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hysterectomy, which may indicate a patient preference for less invasive procedures or a desire to preserve fertility.

CONCLUSION

This study indicated that heavy menstrual bleeding, pelvic or abdominal pain, and dysmenorrhea were considered the most common symptoms in women with uterine myoma, which were accompanied by poor quality of life in women with uterine myoma. In Iraq, surgical intervention represents the primary approach to the treatment of uterine myomas. It is evident that both non-surgical and surgical therapies are of significant importance in improving the severity of symptoms and quality of life.

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