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Evaluation of the Quality of Life of Iraqi Patients Undergoing Hysterectomy and Determining the Logistic Regression for the Study

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Abstract: A total of 140 patients who had undergone hysterectomy due to uterine myoma were identified, of whom 112 completed the survey. A quality-of-life survey was conducted on all 112 patients who underwent hysterectomy with indications of uterine myoma at a specialized hospital within the network of hospitals affiliated with the Iraqi Health Service between 2023 and 2024. The hospitals included in the study were selected from a number of different hospitals.

The results of this study were designed to address the following questions: The analysis of the aspects of quality of life according to the EQ5D scale, in addition to the statistical analysis program IBM SOFT SPSS 22, was employed to analyse the data and demographic values of female patients and to ascertain the statistical differences in this study.

This study delineates the complications and final outcomes experienced by patients following surgical procedures. The most frequently occurring complications in the present study were as follows: The total number of cases identified as having a ureterovaginal fistula was five, representing 4.46% of the total number of cases. Additionally, bowel injury was observed in seven patients, representing 6.25% of the total number of cases.

This study concluded that the different dimensions of health-related quality of life and hysterectomy, when analysed separately, indicate a significant improvement in quality of life for Iraqi patients in all aspects of assessment.

Keywords: Hysterectomy, BMI, Women, QQL, Abdominal hysterectomy, Vaginal Laparoscopic.

Introduction

Hysterectomy is defined as the partial or complete resection of the uterus and represents the second most common surgical procedure that women undergo [1,2,3]. Approximately 20% of women between the ages of 35 and 49 undergo this procedure, with 40% exhibiting depressive reactions [4,5]. Furthermore, the procedure is linked to a considerable risk of adverse psychological responses, as evidenced by numerous studies. This is because the surgery marks the conclusion of a woman's reproductive life and poses a significant threat to her sense of femininity. Conversely, the procedure has been linked to a decline in self-esteem, dysfunction within marital relationships, feelings of anxiety, and social discord. In conclusion, the procedure has an adverse effect on the quality of life of patients [6,7,8]. The SF-36 questionnaire is employed to assess the quality of life of patients, comprising eight specific dimensions: physical function, physical role, body pain, general health,

vitality, social function, emotional role, and mental health. A rating of the parameters is subsequently conducted, with the results classified as follows: terrible, bad, average, good, very good, and excellent. [9,10,11] The objective of the study was to describe the quality of life of patients undergoing hysterectomy, with the rationale that the results can be used to justify the necessity of establishing psychological counselling for each patient who is going to undergo hysterectomy prior to the procedure and as part of the preoperative protocol that is carried out. [12]

A further area meriting assessment is that of psychological quality of life, which is closely linked to the other dimensions, in particular, the sexual one. Psychological complications have undergone significant evolution over the past four decades [13]. The extant literature indicates that alterations in mental health can have a deleterious impact on an individual's ability to cope with their own health situation. [14]

In a review of eight studies, Naughton [15] notes that the psychological state of the woman prior to undergoing this surgery can be affected by factors such as depression, anxiety, alterations in self-esteem, and other mood disorders [16]. These can influence the woman's perception of her health condition. The author also states that depression is the main psychiatric illness that affects these patients. A study of women with preoperative depression revealed an increased prevalence of post-surgical disorders, indicating that hysterectomy itself is not the primary causal factor in the development of these disorders. [17] However, low participation in decision-making regarding the choice of surgical procedure, whether hysterectomy or emergency surgery, has been identified as a significant predictor of the onset of depression and other psychiatric disorders. It is, therefore, pertinent to evaluate the condition of the user prior to, during, and following the procedure. [18]

Jawor et al. (18) highlight that hysterectomy can give rise to self-esteem conflicts and that it is incumbent upon the health professional to address the fears, beliefs, and anxiety of users in order to prevent the emergence of depressive symptoms following discharge.

A prospective Australian study (7) demonstrated that hysterectomy does not produce additional psychological risks compared to other surgical procedures. After 12 months of observation, a reduction in disorders such as depression and anxiety was reported, with no significant differences between the groups.

With regard to hysterectomy and oophorectomy, whether unilateral or bilateral, Khastgir and Studd investigated the association between these surgical procedures and the subsequent emergence of psychiatric disorders years after surgery. Their findings indicated that there was a notable increase in the prevalence of depression.

Material and method

A quality-of-life survey was conducted on all patients who underwent hysterectomy with indications of uterine myoma at a specialized hospital within the network of hospitals affiliated with the Iraqi Health Service from several different hospitals between 2023 and 2024. The same interviewer conducted all surveys to ensure consistency and reliability. The survey comprises seven questions designed to assess changes in patients' quality of life in relation to surgical procedures, postoperative pain, and the degree of satisfaction with the intervention. A total of 140 patients who had undergone hysterectomy due to uterine myoma were identified, of whom 112 completed the survey. Of the 112 patients who were interviewed,

Methods included hysterectomy.

- Vaginal hysterectomy (vaginal hysterectomy)
- Laparoscopic hysterectomy (laparoscopic hysterectomy)
- Abdominal hysterectomy through a small incision
- Abdominal hysterectomy: the incision is very large.

The data were analyzed using the statistical software package SPSS 9. Qualitative data were described in the form of absolute and relative frequencies, and quantitative data by mean, standard deviation or median, and interquartile range (p25-p75). The distribution of data was also considered. The two intervention groups were compared using the chi-square test or Fisher's exact test for those qualitative questions and with the Mann-Whitney U test for question 2, postoperative pain. All statistical tests were considered two-way and significant, $p<0.05$.

The study population consisted of all patients who underwent hysterectomy within the specified period, as well as those whose medical records lacked at least 90% of the data for the variables under analysis. Furthermore, patients who declined to participate in the postoperative telephone satisfaction survey or lacked a telephone means of contact were included in the study. The occurrence of intraoperative and postoperative complications was considered an outcome variable. Complications were defined as any undesirable and/or involuntary consequence of surgery that affected the patient. Intraoperative complications were defined as those that occurred during the surgical procedure and postoperatively, compared to those reported within 30 days following the surgical intervention.

Results

Table 1- Demographic assessment of Iraqi women who underwent hysterectomy.

Variable, N=112	Value
Age	
Mean and sd	37.44±4.87
BMI	
MEAN AND SD	32.2±3.22
Comorbidities F, P%	
Blood pressure	40 (35.7)
Diabetes	20 (17.8)
Joint diseases	15 (13.3)
not	37 (33.03)
Academic achievement	
Primary	15 (13.3)
Secondary	45 (40.1)
University	52 (46.4)
Type of anesthesia used	
General anesthesia	100 (89.2)
Regional anesthesia	12 (10.7)
hysterectomy	
Vaginal	20 (17.8)
Laparoscopic	70 (62.5)
Abdominal hysterectomy through a small incision	10 (8.9)
Abdominal hysterectomy: the incision is very large	12 (10.7)
Symptoms	
Heavy periods and very painful periods.	44 (39.2)
Increased menstruation.	30 (26.7)
Blood clots.	20 (17.8)
Urinating frequently.	10 (0.8)
Lower stomach pain	8 (7.14)

Table 2- EQ5D scale – Assessment quality of life of Iraqi patients

	Mean and sd
Pain and discomfort	56.4±3.867
Anxiety	61.2±4.45
depression	59.9±3.76
Mobility	51.1±3.21
Self-case	46.65±3.567
Usual activity	42.2±3.22

Fig 1- Evaluation of patient outcomes according to the operating characteristics of the patients' uteruses

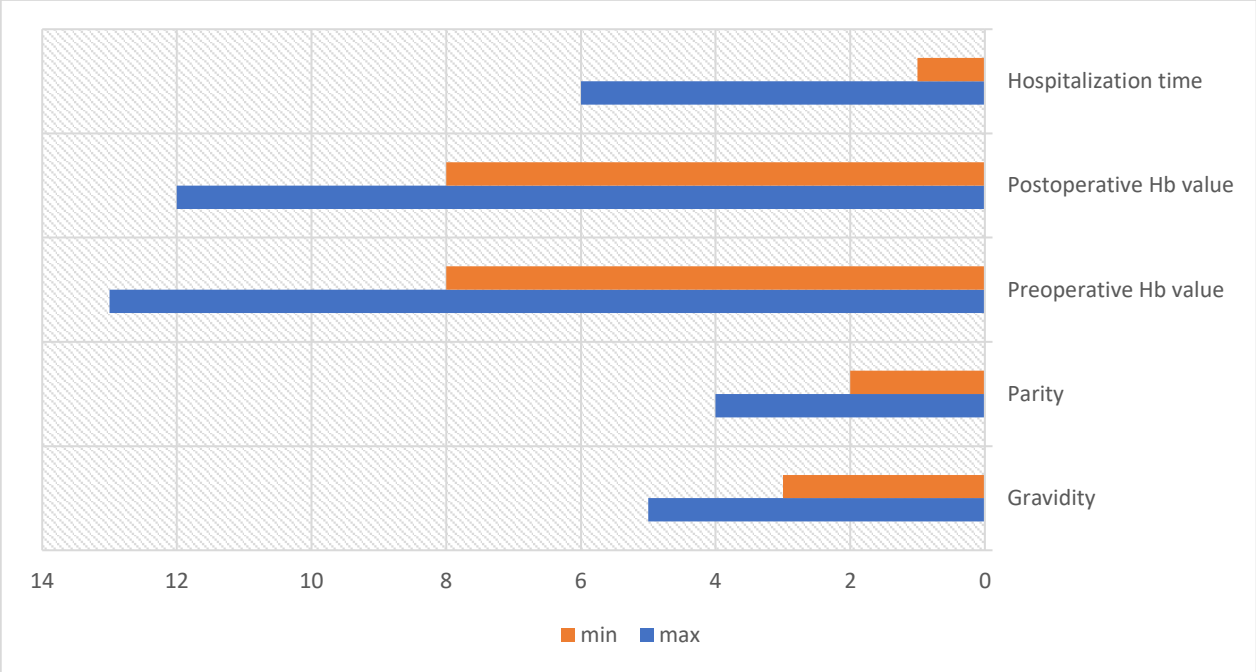

Fig 2- Outcomes of patients according to Operation time

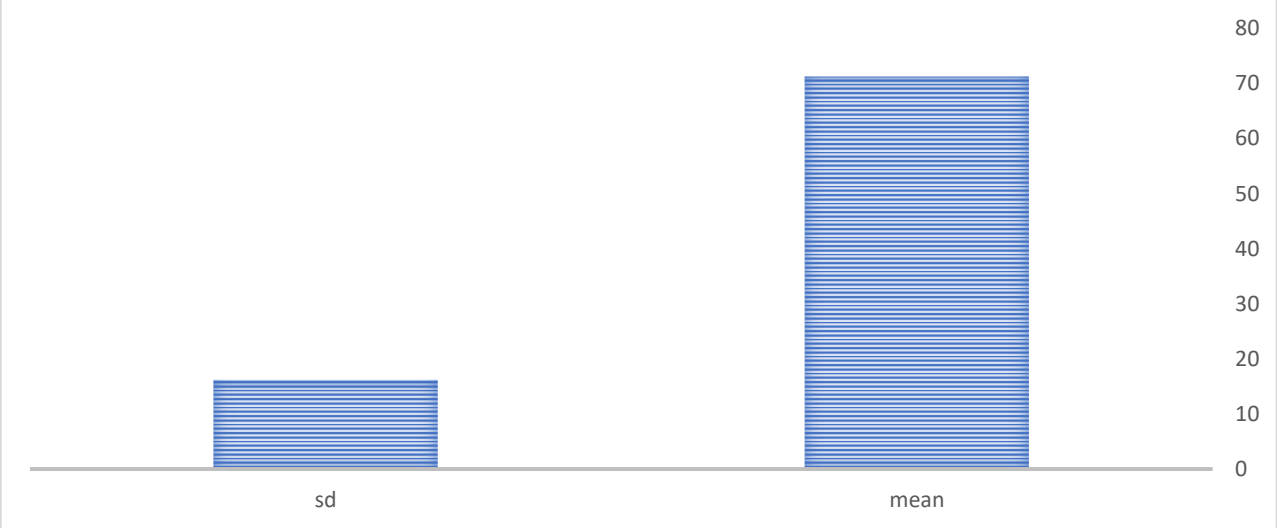

Fig 3- Identify complications and final outcomes experienced by patients after surgery.

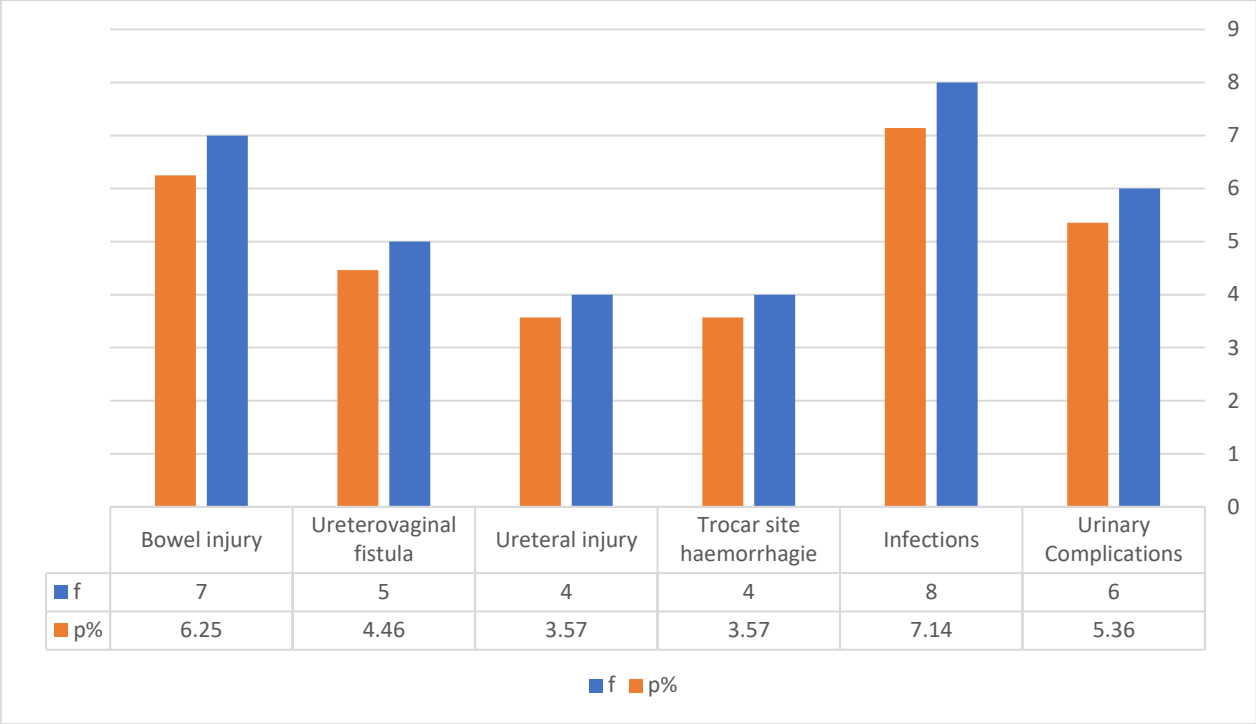

Table 3- Evaluation of quality of life of patients after surgery according to EQ5D scale

	Mean and sd
Pain and discomfort	33.4±2.89
Anxiety	34±6.25
depression	44.9±2.33
Mobility	41.1±4.4
Self-case	38.8±2.99
Usual activity	34.6±1.99

Table 4- Logistic regression to patient outcomes to determine risk factors in this study.

Variable	CS	OI	P-value
AGE	1.92	1.1-2.4	0.66
HB	1.373	0.938-1.543	0.04
Vaginal	2.033	1.827-3.983	<0.001
Urinary Complications	2.966	1.44-4.4	<0.001
Infections	3.11	2.77-5.23	<0.001
Bowel injury	3.44	1.77-4.44	<0.001
Parity	1.88	0.987-2.77	0.045

Discussion

This study examined the complications that occurred in Iraqi patients who underwent cecal resection. Furthermore, the quality of life of Iraqi patients was assessed prior to and following the surgical procedure. The patients were recruited from a number of different hospitals in Iraq. The ages of the patients were analysed using a statistical analysis program, which yielded a mean of 37.44±4.87 and a standard deviation of 4.87. Furthermore, a high body mass index was observed in female patients, with a mean value of 32.2 ± 3.22.

In this study, the uterus was removed via a number of different surgical techniques. Vaginal hysterectomy is a minimally invasive procedure that results in minimal discomfort and no scarring.

Laparoscopic hysterectomy is associated with reduced postoperative discomfort, as the procedure leaves approximately three to four small incisions in the abdomen, depending on the size of the laparoscope used.

An abdominal hysterectomy is performed via a small incision measuring less than or equal to 6 cm. In contrast, an abdominal hysterectomy involves a significantly larger incision. The most prevalent approach in this study was laparoscopic, employed in 70 patients (62.5%).

Notwithstanding the constraints inherent in interpreting the results of an unsupported telephone survey conducted following surgical intervention, the data provided by patients can be of significant value for evaluating a specific surgical intervention for the same indication within the same hospital setting. When patients were queried as to whether the surgical procedure had resulted in a change to their quality of life, the majority responded in the affirmative, with only a minority indicating that their quality of life remained unchanged. These findings are consistent with those reported by Kierolf (4), who conducted a satisfaction survey after hysterectomy on 1299 patients and found that 12 months after surgery, 85% of patients reported that their health was better than before the surgical intervention. In this regard, it should be noted that in the survey published in this article, when patients were asked whether they would undergo the intervention again (question 7), a large majority (88.4%) answered in the affirmative, while a minority (7.1%) indicated that they were unsure or did not know, and a smaller minority (4.5%) answered in the negative. It is noteworthy that while 78.6% of patients reported feeling better after surgery, a greater number (a 10-point difference of 88.4%) indicated that they would undergo the intervention again. [19,20,21]

Figure 3 delineates the complications and final outcomes experienced by patients following surgical procedures. The most frequently occurring complications in the present study were as follows:

- Urinary complications were experienced by six patients, representing 5.36% of the total number of cases.
- Infections were observed in eight patients, accounting for 7.14% of the total number of cases.
- Trocar site haemorrhage was noted in four patients, representing 3.57% of the total number of cases.
- Ureteral injury was observed in four patients, representing 3.57% of the total number of cases.
- Ureterovaginal fistula was identified in five patients, representing 4.46% of the total number of cases.
- Bowel injury was observed in seven patients, representing 6.25% of the total number of cases.

With regard to the logistic regression analysis of patient outcomes to ascertain risk factors in this study, the following results were obtained:

AGE (CS) 1.92 1.1-2.4 with P-value 0.66

HB (CS) 1.373 0.938-1.543 with P-value 0.04

Vaginal (CS) 2.033 1.827-3.983 with P-value <0.001

Urinary occurrence of complications was found to be significantly associated with the following variables: 2.966 (95% CI: 1.44, 4.4), $p < 0.001$. Similarly, infections were significantly associated with the following variables: 3.11 (95% CI: 2.77, 5.23), $p < 0.001$. Furthermore, bowel injury was significantly associated with the following variables: 3.44 (95% CI: 1.77, 4.44), $p < 0.001$. Finally, parity was significantly associated with the following variables: 1.88 (95% CI: 0.987, 2.77), $p = 0.045$.

The statistical values obtained indicate that hysterectomy does not result in a deterioration of quality of life among patients. Indeed, the opposite appears to be the case, with a small percentage of patients

reporting a quality of life that could be described as poor. Among the remaining patients, 35.2% reported a good quality of life, 21.5% a very good quality of life, and 5.6% an excellent quality of life. In a study published in 2006, Fomlaki and colleagues observed that patients who undergo hysterectomy may experience depressive symptoms, feelings of sadness, and hopelessness. However, the results of this study indicate that a significant proportion of the surveyed population reported an improvement in their quality of life following the procedure. This is likely due to the fact that the symptoms that previously affected them no longer do so after the operation. [22]

Conclusion

There are few studies that assess the quality of life in women who have undergone hysterectomy. However, there are different publications on the dimensions that affect quality of life separately. This situation suggests that it is necessary to create a tool that contains parameters of the different dimensions of health-related quality of life and hysterectomy, as separate analysis may indicate a significant improvement in quality of life for Iraqi patients in all aspects of assessment.

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