

Comparative Analysis of Surgical Treatments for Hemorrhoids and Their Impact on Quality of Life

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Abstract: The objective of this study was to compare the experiences of surgeons with patients suffering from hemorrhoids in Iraq and to assess the impact of these experiences on the quality of life of the patients. A cross-sectional study was conducted involving 100 patients aged 18 and above from various Iraqi hospitals. The study analyzed the quality of life of patients before and after open surgery and laser treatment. The aim was to test the hypothesis that there is no statistical relationship between the type of surgery used and the quality of life of the patients. A measure of health-related quality of life was employed, taking into account factors such as physical health and well-being, social relationships, job roles, and lifestyle satisfaction. The study involved 75 males and 25 females, with 70 patients undergoing general anesthesia. The study assessed patients' quality of life using a special scale and questionnaire. The results demonstrated a decline in preoperative quality of life, with a clear correlation between pain level and diminished quality of life, and this highlights the necessity for enhanced patient care. The study revealed a direct association between the quality of life of patients post-surgery and the surgical procedure employed, with laser surgery exhibiting particularly favorable outcomes. This challenges the hypothesis proposed in the study.

Keywords: Surgical, Quality of Life, Hemorrhoids, Patient, HRQoL.

INTRODUCTION

Hemorrhoidal enlargement remains one of the most prevalent benign anal diseases, particularly in the Eastern world (Huang, H. *et al.*, 2021). It is estimated that approximately 5% of the population exhibits hemorrhoidopathy in some form (Everhart, J. E., & Ruhl, C. E., 2009). This should result in the dilation of the vascular plexuses of the submucosal hemorrhoids. The most common symptoms include pain, anal itching, fever, and hemorrhagic mucosal prolapse (Yang, J. Y. *et al.*, 2019; Joshi, G. P. *et al.*, 2012). These are the most frequent symptoms, and traditional hemorrhoidectomy is the gold standard for the definitive method of healing hemorrhoids, as it has a significant amount of complications and recurrence of symptoms (Megari, Kalliopi., 2013; Riss, S. *et al.*, 2012).

Health-related quality of life (HRQoL) is defined as the effect of health on life's quality. It could be described as the extent to which an individual's physical, emotional, and social well-being affects how well they function at a given time (Bussen, D. *et al.*, 2011).

In the case of HD, which is a non-cancerous illness, the main objective in dealing with it would be to resolve its symptoms as well as to improve the quality of life of those affected (Lehur, P. A. *et al.*, 2016). Nevertheless, numerous studies employ HRQoL measures as endpoints for the diseases they treat, with some incorporating cost-effectiveness into their assessments of interventions (Lehur, P. A. *et al.*, 2016).

lack substantial knowledge regarding how patients with HD perceive their health status relative to that of others.

This comparison is essential for determining the severity of the disease and for comparing its burden with that of other less harmful conditions. Consequently, it will assist in determining the optimal allocation of resources for the treatment of individuals with this condition in comparison to those with other conditions (Thomson, W. H. F., 1975).

Hemorrhoidal disease represents the most prevalent anorectal disease, with a high prevalence rate (Lestar, B. *et al.*, 1989). It can have a significant negative impact on the quality of life of patients affected by it. The objective of this study is to compare the surgical treatment of hemorrhoids in terms of technical and clinical success, related complications and infection rates, and the effectiveness of the hemorrhoid technique (Riss, S. *et al.*, 2012).

A review of the literature indicates that 65% of patients with hemorrhoids experience moderate or severe pain in the postoperative period (Bussen, D. *et al.*, 2011). Pain can cause patients to experience anxiety about defecation and eating, which may lead to difficulty defecating, urinary retention, and imbalance. This can also affect electrolyte balance, which has a significant impact on the patient's quality of life and rehabilitation (Lehur, P. A. *et al.*, 2016). Consequently, it is crucial to examine the factors influencing early beliefs about postoperative pain in patients with mixed hemorrhoids (Bussen, D. *et al.*, 2011). there have been few local studies on the factors influencing early postoperative pain beliefs in hemorrhoid patients. These studies have been limited to describing the relationship

between pain beliefs, emotional states, and psychological pain (Watson, A. J. et al., 2017).

MATERIAL AND METHOD

Collection Data

A cross-sectional study was conducted on 100 patients with hemorrhoids from several different hospitals in Iraq, the study period spanned from February 2023 to March 2024.

The study included patients aged 18 years and above who had been diagnosed with grade III or IV, I, or II hemorrhoids, as defined by the American Society of Colon and Rectal Surgeons. All patients provided informed consent to participate in the study and to have their data used for research purposes.

Patients with hemorrhoidectomy procedures performed in conjunction with other surgical procedures (e.g., lumpectomy or tumor resection), emergency surgeries, lactation conditions, a history of adverse drug reactions, or other contraindications were excluded from the study.

Study design

In this study, patients were divided into two groups, with the first group undergoing open surgery and the second group undergoing laser surgery.

The quality of life was also evaluated before and after surgery, and the strength of the associated statistical relationship was extracted. This was done in order to test the hypothesis that there is no statistical relationship between quality of life and the type of surgeon used.

In this study, the quality of life of patients was evaluated according to the Health-related Quality of Life Measure (quality of life is becoming a standard outcome measure in many clinical trials and clinical practices). A number of factors are associated with the measurement of quality of life, including physical health, physiological well-being, social relationships, job roles, and the subjective sense of lifestyle satisfaction.

Internal hemorrhoids are classified into several grades based on their appearance and degree of prolapse.

First-degree hemorrhoids are characterized by bleeding from the anal cushions without these cushions protruding through the anus. Second-degree

hemorrhoids are distinguished by the anal cushions protruding through the anus when stretched and stressed, but they retract spontaneously. Third-degree hemorrhoids are characterized by the prolapse of the anal cushions through the anus due to tension and stress, which can be manually pushed back into the anal canal. Fourth-degree hemorrhoids are characterized by the presence of prolapsed anal cushions that are unable to be returned to their normal position.

Aim of study

The objective of this study was to conduct a comparative analysis of surgeons with patients suffering from hemorrhoids in Iraq and to identify the patients' life history scores before and after the procedure.

Statistical analysis

In this study, the data and the demographic data were analysed using the IBM SPSS 22 program, in addition to the Microsoft Excel 2013 program, where figures were drawn that show the frequency and percentage values for the parameters that were extracted in this study. Furthermore, the P-value was calculated to ascertain the strength of the statistical relationship.

RESULTS

Table 1: General demographic of patients

Variable	Laser	Open	P-value
Age, mean±sd	29.3±4.9	34.3±3.2	0.6
Sex			
Male, f	35	40	0.98
Female f	15	10	0.67
BMI	28.7±2.2	29.9±3.1	0.98
Type of anesthesia			
Local anesthesia, f	13	17	0.99
general anesthesia, f	32	38	0.55
Symptoms of hemorrhoids			
Lumps on the anus	8	8	0.00
Bleeding from the anus	12	9	0.8321
Mucus in the rectum	9	13	0.772
Itch	16	20	0.599
Duration of surgery (h)			
Mean ±SD	12.1±0.66	40.9±5.5	0.01

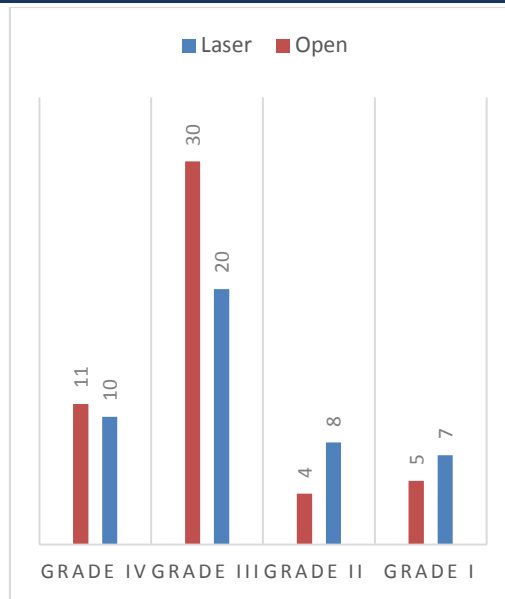


Figure 1: Classification of patients according to the degree of hemorrhoids

Table 2- Evaluation of the degree of pain before surgery according to the Health-related Quality of Life Measure

Variable	Laser	Open	P-value
physical health	40±10.5	38.4±8.9	0.54
mental health	28.9±7.7	31.3±9.5	0.1
social relationships	35.7±7.4	41.5±6.6	0.82
general well-being	47.5±5.4	44.4±8.1	0.91

Table 3- Evaluate patients according to the relationship between the type of operation and the results after surgery.

Variable	Laser	Open	P-value
bleeding	1	2	0.821
There is urinary retention	2	3	
unloading	2	2	
pain	4	4	
Length of stay in hospital (days)	1-3	1-4	0.91

Table 4- Evaluation of the degree of pain postoperative according to the health-related Quality of Life Measure

Variable	Laser	Open	P-value
physical health	70±6.8	60.8±7.1	<0.001
mental health	66.9±8.8	59.9±9.1	0.05
social relationships	70.1±4.1	68.9±4.8	0.84
general well-being	68.8±5.7	62.2±4.9	<0.001

Table 5- Evaluating the type of relationship between the type of operation and its impact on quality of life

Variable	N	Significance level	correlation coefficient
Laser	45	-0.93	0.01
Open	55	-0.44	0.023
QOL	100	1	0.01

Table 6- Determine the type of logistic regression to evaluate the risk factor in this study

Variable	CS (OI)	P-value
Age	1.9 (1.3-2.4)	0.43
Sex	1.5 (0.8-1.9)	0.32
mental health	3.1 (1.7-5.2)	0.02
Grade I	3.6 (2.2-4.9)	0.01
grade II	3.2 (1.6-4.7)	0.01
physical health	2.8 (1.89-3.5)	0.064
BMI	2.77 (1.4-3.8)	0.01

DISCUSSION

A cross-sectional demographic study was conducted in Iraq on one hundred patients suffering from hemorrhoids. These patients were distributed according to two groups according to the type of operation that was performed. The patients were classified into two groups (laser and open surgery), and the survival rate ranged from 20 to 40 years. The patients were also distributed according to gender, with 75 males and 25 females. In this study, two types of anesthesia were used: local anesthesia and general anesthesia. The prevalence of the use of general anesthesia was found to be 70 patients.

In this study, the quality of life of patients was evaluated according to a special scale, as indicated in Table 2. A questionnaire was distributed to patients in order to determine their quality of life according to physical factors and general health, in addition to social relations and public interest. In this study, a reduction in quality of life was observed in accordance with the scale previously employed. The results of the study indicated that the general rates of the quality-of-life scale decreased in all aspects following surgery (Watson, A. J. *et al.*, 2017; Thomson, W. H. F., 1975). Furthermore, a direct relationship was observed between the decrease in quality of life and the degree of pain experienced prior to surgery.

It is widely acknowledged in the medical literature that complication rates are one of the criteria used to assess the quality of care. Consequently, it is of the utmost importance to ensure that patients are adequately monitored in the postoperative period in order to enable the auditing of the service provided, particularly in cases where the disease in question is initially considered to be either essential or common (Lestar B., et al 1989). However, this can potentially lead to serious consequences that significantly reduce the quality of life of patients (Bussen, D., *et al.*, 2011).

In hemorrhoid surgery, the most common early complications are urinary retention and postoperative pain (Sit, M. *et al.*, 2004). Currently, short-term surgery necessitates the utilization of local anesthetic techniques that include fluid restriction in the immediate postoperative period.

This is a fact that is directly related to urinary retention in this type of surgery. Non-steroidal analgesia has been shown to alleviate this condition and reduce the rate of urinary retention from 17-50%, depending on the series, to 2%.

This study evaluated the quality of life of patients following surgery according to the surgical procedure employed. It was observed that levels of quality of life increased in all aspects, with laser surgery achieving particularly satisfactory results. This was contrary to the hypothesis that was used in the methodology of this study. The research demonstrated a direct correlation

between the level of quality of life and laser surgery, which contributed to the achievement of these results.

The main goal of treating HD is to cure symptoms and better HRQoL. We realized that after surgery, there was a considerable reduction of patient-reported symptoms alongside visible changes on measures related to HRQoL. The most significant progress was observed in bodily pain, which is a category that combines pain intensity and its interference with normal activities.

CONCLUSION

It is unfortunate that a person can suffer from hemorrhoidal disease, as this condition can significantly reduce the quality of life, depending on the severity of the symptoms. However, surgical intervention can result in a better quality of life. This research demonstrates that laser surgery for piles can indeed improve patients' quality of life after operations. Postoperative pain was influenced by age and gender, although these factors did not relate to the anesthetic situation.

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