

## Quality of Life (QoL) Post-hemorrhoidectomy: A Single Centre Cross-Sectional Study in Jeddah, Saudi Arabia

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### KEYWORDS

Patient satisfaction, Quality of Life (QoL), Hemorrhoidectomy, Symptomatic hemorrhoidal disease

### ABSTRACT

**Introduction:** Hemorrhoidectomy still ranks among the most common surgical treatments against symptomatic hemorrhoidal disease, especially in those cases when conservative approaches fail to provide proper relief. This cross-sectional study aimed at evaluating QoL in patients after hemorrhoidectomy, thus showing both the benefits and challenges faced in the postoperative period.

**Methods:** A structured pre-validated questionnaire was completed by a series of 150 patients. Physical discomfort, psychological well-being, daily functional ability, and overall satisfaction with surgical outcomes were evaluated and estimated in a period from 6 to 12 months post operation.

**Results:** 150 patients were included in this study. 65% reported significant symptom improvement after hemorrhoidectomy, and 70% noted an enhanced quality of life. Overall, 75% expressed satisfaction with their surgical outcomes.

**Conclusions:** The data show that although hemorrhoidectomy usually leads to improved QoL, individualized postoperative management is important as far as optimizing remaining symptoms and patient satisfaction are concerned. Patients underlined the importance of a holistic approach from preoperative counseling to postoperative care in the management of hemorrhoidal disease.

### INTRODUCTION

Hemorrhoidal disease is among the most frequent pathologies in the world, involving a very high percentage of the adult population Worldwide, around 50%-85% of people suffer from hemorrhoids. Symptoms may range from mere discomfort to actual agony, itching, and bleeding impeding everyday life [1,2]. Hemorrhoidectomy remains the standard surgical operation for definitive treatment particularly for symptomatic grade 3 and grade 4 hemorrhoids especially when symptoms are resistant to conservative management, including dietary changes, topical applications, and minimal invasive procedures such as Sclerotherapy which is injection of a sclerosant to shrink hemorrhoids, Cryotherapy which includes application of extreme cold to destroy hemorrhoidal tissue, or Rubber Band Ligation (Barron's Method) where a rubber band is placed around the base of the hemorrhoid to cut off blood supply, or a combination of both Barron's Method and Cryotherapy for enhanced effectiveness [3-5]. While Hemorrhoidectomy has been relatively effective for symptom relief and prevention of recurrence, it often is difficult to overcome due to considerable pain, discomfort, and complications which may impinge on the quality of life in the postoperative period [6-8].

Assessment of QoL after hemorrhoidectomy is important as it gives us a fair idea about the wide impact of surgery on the physical, psychological, and social status of the patient [9,10]. In literature, the quality of life postoperatively has been variably reported, demonstrating overall improvement in many, while others continue to have pain or discomfort and hence do not consider the surgery to be highly successful [11]. Our study focuses on addressing such gaps through an adequately explored QoL in patients at 6 to 12 months from surgery, assessing recovery patterns with long-term impacts on daily activities, mental health, and overall life satisfaction. These findings will be invaluable to implement better perioperative practices and long-term management strategies for patients undergoing hemorrhoidectomy.

## **METHODS**

This survey targeted patients suffering from hemorrhoids who had undergone hemorrhoidectomy surgery from a tertiary care Dr. Soliman Fakeeh hospital 6-12 months preceding the survey period. Ethical approval was first obtained from the Institutional Review Board of Fakeeh Medical College, and participants gave their consent in writing before the start of the enrollment. Consequently, 150 patients were selected based on the following eligibility criteria: adults aged 18 years and above, with no other conventional open surgical interventions such as Milligan Morgan hemorrhoidectomy or Ferguson hemorrhoidectomy for hemorrhoidal disease within the study period. Exclusion criteria included recurrent cases diagnosed with more than 1 pathological condition, hemorrhoids accompanied by perianal abscess, piles due to secondary cause, Inflammatory Bowel Disease (IBD).

QoL assessment was performed using a validated QoL questionnaire estimating various domains: physical symptoms, psychological well-being, and social functioning. Satisfaction with surgical outcomes was also assessed. The instrument included both quantitative and qualitative items; the quantitative questions estimated the severity of pain, functional limitation, and emotional distress by using a five-category Likert scale. The questions were divided into sections addressing specific aspects of postoperative life, including: the level of pain and discomfort; the ability to perform everyday activities; psychological stability; and social interactions, including overall satisfaction with the effect of the treatment.

Descriptive statistics were performed for the analysis of baseline characteristics, while a part of the inferential statistical analyses included chi-square tests and t-tests in order to find the relation of different variables concerning patients' characteristics and QoL outcomes. Moreover, the correlation analysis helped find significant factors related to QoL, such as age, sex, comorbidities, and complication rate. Data analysis was done using SPSS version 26.0, and the p-value of less than 0.05 was considered statistically significant.

## **RESULTS**

Of the 150 patients (see Table 1) participating in this study, approximately 65% (n = 98), when questioned regarding symptom improvement after hemorrhoidectomy surgery, claimed there had been an overall marked reduction in symptoms, especially pain, and with less bleeding episodes (see Table 2). Of these, 70% stated that their quality of life had improved over the months following surgery, with a median QoL gain of 60% compared to preoperative levels. A majority experienced noticeable relief while 35% still said that they were in some discomfort. More specifically, a total of 20% (n = 30) of the respondents continued to experience mild-to-moderate anal pain with sitting or walking for long periods of time since it did impede them from enjoying participation in activities as before. Another 18% (n = 27) showed itching or mild irritation near the surgical site, symptoms persisting between 3 and 6 months after surgery (see Table 3). Whereas a smaller subset, 10% (n=15), developed minor incontinence or urgency with frequent bowel movements. The majority of these complications were described as "manageable." Improvements in quality of life appeared to be age- and complication-rate dependent. Patients aged < 50 years

tend to have higher satisfaction scores and report a quicker return to normal activities (see Table 4). In contrast, for the patients aged over 60 years, and for those patients with co-morbidities at the time of surgery, such as diabetes and hypertension, recovery times longer than expected were more frequently reported, and QoL improvements were rated moderate rather than high. Overall, 75% (n=113) were satisfied with the surgery (see Table 5) as improvement in pain and bleeding following surgery outweighed residual symptoms, whereas 15% (n=23) expressed disappointment with recovery from surgery due to residual discomfort, concern about recurrence, and limited lifestyle inconvenience.

**Table 1: Demographic table**

Demographic Variable	Category	Number (n)	Percentage (%)
Age Group	< 50 Years	64	42.70%
	50–60 Years	56	37.30%
	> 60 Years	30	20.00%
Gender	Male	86	57.30%
	Female	64	42.70%
Comorbidities	Diabetes	34	22.70%
	Hypertension	41	27.30%
	Both Diabetes & Hypertension	20	13.30%
	None	55	36.70%
Piles grade	Grade 3	88	58.70%
	Grade 4	62	41.3%
Pre-Surgery Symptoms	Pain	150	100%
	Bleeding Episodes	130	86.70%
	Quality of Life Affected	140	93.30%

**Table 2: Symptom Improvement after Hemorrhoidectomy Surgery**

Symptom	Improved (n)	Not Improved (n)
Pain	98 (65.30%)	52 (34.70%)
Bleeding Episodes	100 (66.70%)	50 (33.30%)
Overall QoL Gain	69 (70.4%) of 98	29 (29.6%) of 98

**Table 3: Post-Surgical Complications**

Complication	Frequency (n)	Percentage (%)	Duration (Months)
Mild-to-Moderate Anal Pain	30	20.00%	Persistent > 6 months
Itching/Mild Irritation	27	18.00%	3–6 months
Minor Incontinence/Urgency in flatus	15	10.00%	Variable, manageable

**Table 4: Quality of Life (QoL) Improvements by Age Group**

Age Group	High QoL Gain (%)	Moderate QoL Gain (%)	Slow Recovery (%)
< 50 Years	75%	20%	5%
50–60 Years	60%	28%	12%
> 60 Years	50%	30%	20%

**Table 5: Patient Satisfaction and Recovery Outcomes**

Satisfaction Level	Number (n)	Percentage (%)	Key Factors Mentioned
Highly Satisfied	113	75.3%	Significant pain/bleeding reduction; manageable complications
Neutral	14	9.4%	Moderate residual discomfort; limited activity restrictions
Dissatisfied	23	15.3%	Concerns over complications, recurrence, or lifestyle inconvenience

## DISCUSSION

This study evaluates patients post-hemorrhoidectomy highlighting the impact on the quality of their life. We included responses from 150 patients assessed 6 to 12 months post-surgery. The findings indicate a great peak toward improvement in various aspects of life, including physical comfort, psychological well-being, and overall satisfaction with surgical outcomes. Approximately 65% of patients reported a marked reduction in symptoms post-hemorrhoidectomy, particularly in pain and bleeding, leading to an overall QoL improvement of about 60% compared to preoperative levels. The persistence of mild-to-moderate anal pain in 20% of respondents and skin irritation in 18% suggests that while surgical intervention is effective, it might come with complications. These residual symptoms can affect daily activities and social interactions, indicating a need for ongoing support and management strategies tailored to individual patient needs. Moreover, the emergence of minor incontinence in 10% of patients. A prospective study by H. Jóhannsson et al, found that incontinence after hemorrhoidectomy may be caused by sphincter defects and impaired sphincter function, highlighting the need for cautious patient selection and improved surgical techniques [12]. In a very similar study by Mallmann et al, factors predicting postoperative pain and quality of life (QoL) following hemorrhoidectomy were evaluated. Analyzing data from a multicenter randomized trial of 770 patients, the research found that younger age, preoperative pain, and the use of tamponades significantly increased the risk of early postoperative pain. The presence of a pudendal block was associated with reduced pain levels. While overall QoL remained stable, approximately one-third of patients reported improvements similar to the findings of our study, largely linked to pain relief and opioid use [13]. Demographics played a crucial role in recovery outcomes as aging is an important risk factor for postoperative morbidity and mortality, with higher morbidity rates and mortality rates in older patients undergoing major operations [14]. Younger patients in our study (under 50 years) exhibited higher satisfaction scores and quicker returns to normal activities, whereas older patients and those with comorbidities reported longer recovery times and moderate QoL improvements. This suggests that age and health status should be considered as important factors while conducting preoperative assessments and postoperative care plans. It also highlights the importance of personalized treatment approaches that consider the unique circumstances of each patient as called nowadays as tailored medicine.

Furthermore, the study emphasizes the need for a holistic approach to patient management, from preoperative education to postoperative care. Patients expressed the need for comprehensive support systems to address both physical and psychological aspects of recovery. This aligns with the growing recognition of the importance of patient-centered care in surgical outcomes, where managing expectations and providing emotional support can significantly enhance overall satisfaction.

In conclusion, while hemorrhoidectomy generally leads to significant improvements in QoL, the findings underscore the importance of individualized postoperative management. Addressing

residual symptoms and creating a supportive environment for recovery can optimize patient satisfaction and long-term outcomes. Future studies should explore the implementation of tailored postoperative care strategies and their effects on enhancing recovery and quality of life in this patient population.

The study could benefit from several enhancements to strengthen its findings. First, extending the follow-up duration beyond 12 months would provide insights into the long-term effects of surgical interventions and any late-emerging symptoms or complications. Additionally, increasing the sample size would enhance the statistical power of the study, allowing for more generalized conclusions regarding the effectiveness of different surgical techniques. A more detailed tracking of residual symptoms, such as specific pain scales or quality of life questionnaires, could help identify areas needing further management. Furthermore, while the study focuses on overall quality of life post-hemorrhoidectomy, future research could benefit from directly comparing different surgical techniques to better understand their impacts on recovery. Finally, exploring the psychological and social aspects of recovery more thoroughly could help in the development of targeted support strategies for patients experiencing emotional distress post-surgery.

The study has certain limitations that should be acknowledged. The reliance on self-reported data for symptom assessment may introduce biases, as patients might underreport or overreport their symptoms. Also, the heterogeneity of participants, including variability in demographics, comorbidities, and preoperative conditions, may affect the generalizability of the results on a large scale. The absence of a control group in our cross-sectional design makes it challenging to attribute improvements to the surgical intervention alone rather than other influencing factors. Despite these limitations, the study presents several strengths that contribute to its value. It demonstrates significant improvement metrics, with 65% of patients reporting a marked reduction in symptoms and an overall 60% improvement in quality of life, indicating the effectiveness of hemorrhoidectomy. The holistic approach taken by the study emphasizes both physical and psychological recovery, aligning well with current trends in patient-centered care and supporting the need for comprehensive management strategies. Furthermore, the insights regarding the influence of age and health status on recovery outcomes can inform preoperative assessments and individualized care plans. By highlighting the variability in postoperative recovery and the persistence of symptoms, the study adds valuable data to the ongoing discourse about hemorrhoidectomy outcomes. Lastly, prioritizing patient-reported outcomes is crucial for understanding the real-world impacts of surgical interventions on quality of life. By addressing the identified areas for improvement, the study can guide future research to enhance postoperative management in hemorrhoidectomy patients.

## **CONCLUSION**

The findings of this cross-sectional survey confirm that hemorrhoidectomy significantly improves QoL for the majority of patients, with great improvements in pain relief, functional capacity, and emotional health. Although the majority of the patients are very satisfied, a minority with minor complications identifies the need to adopt a more holistic approach to postoperative management. With increased support, like pain management, counseling on lifestyle modifications, and follow-ups, postoperative symptoms might be further reduced to achieve long-term outcomes of hemorrhoidectomy. These observations stress the importance of an integrated approach toward hemorrhoidal disease for better physical recovery combined with life satisfaction.

## **Declaration**

### **Consent:**

The study was approved by Dr. Soliman Fakeeh hospital research and ethical review committee.

### **Availability of data and materials**

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

### **Consent for Publication**

All authors approve the publication of the final version of the manuscript.

### **Author's Contribution statement**

All authors made significant contributions to this research in the form of study design, acquisition of information, drafting, revising and critically reviewing the manuscript.

### **Conflict of interest**

No potential conflict of interest relevant to this article was reported.

### **REFERENCES**

1. Al-Masoudi RO, Shosho R, Alquhira D, Alzahrani M, Hemdi M, Alshareef L. Prevalence of Hemorrhoids and the Associated Risk Factors Among the General Adult Population in Makkah, Saudi Arabia. *Cureus*. 2024 Jan 3;16(1):e51612. doi: 10.7759/cureus.51612.
2. Milone M, Maietta P, Leongito M, Pesce G, Salvatore G, Milone F. Ferguson hemorrhoidectomy: is still the gold standard treatment? *Updates Surg*. 2012 Sep;64(3):191-4. doi: 10.1007/s13304-012-0155-2.
3. Hwang SH. Trends in Treatment for Hemorrhoids, Fistula, and Anal Fissure: Go Along the Current Trends. *J Anus Rectum Colon*. 2022 Jul 28;6(3):150-158. doi: 10.23922/jarc.2022-012.
4. Brilliantino A, Renzi A, Talento P, Bruscianno L, Marano L, Grillo M, Maglio MN, Foroni F, Palumbo A, Sotelo MLS, Vincenzo L, Lanza M, Frezza G, Antropoli M, Gambardella C, Monaco L, Ferrante I, Izzo D, Giordano A, Pinto M, Fantini C, Gasparrini M, Schiano Di Visconte M, Milazzo F, Ferreri G, Braini A, Cocozza U, Pezzatini M, Gianfreda V, Di Leo A, Landolfi V, Favetta U, Agradi S, Marino G, Varriale M, Mongardini M, Pagano CEFA, Contul RB, Gallese N, Uccchino G, D'Ambra M, Rizzato R, Sarzo G, Masci B, Da Pozzo F, Ascanelli S, Liguori P, Pezzolla A, Iacobellis F, Boriani E, Cudazzo E, Babic F, Geremia C, Bussotti A, Cicconi M, Sarno AD, Mongardini FM, Brescia A, Lenisa L, Mistrangelo M, Zuin M, Mozzon M, Chiriatti AP, Bottino V, Ferronetti A, Rispoli C, Carbone L, Calabrò G, Tirrò A, de Vito D, Ioia G, Lamanna GL, Ascione L, Greco E, Bianchi P, D'Orlando G, Stazi A, Antonacci N, Renzo RMD, Poto GE, Ferulano GP, Longo A, Docimo L. The Italian Unitary Society of Colon-Proctology (Società Italiana Unitaria di Colonproctologia) guidelines for the management of acute and chronic hemorrhoidal disease. *Ann Coloproctol*. 2024 Aug;40(4):287-320. doi: 10.3393/ac.2023.00871.0124.
5. Mallmann C, Langenbach MR, Florescu RV, Köhler A, Barkus J, Ritz JP, Gebauer F, Lefering R, Boenicke L. Parameters predicting postoperative pain and quality of life after hemorrhoidectomy: follow-up results from a prospective multicenter randomized trial. *Int J Colorectal Dis*. 2023 Nov 3;38(1):262. doi: 10.1007/s00384-023-04557-9.
6. Szyca R, Leksowski K. Assessment of patients' quality of life after haemorrhoidectomy using the LigaSure device. *Wideochir Inne Tech Maloinwazyjne*. 2015 Apr;10(1):68-72. doi: 10.5114/wiitm.2015.49672.
7. Lauricella S, Palmisano D, Brucchi F, Agoglitta D, Fiume M, Bottero L, Faillace G. Long-term results and quality of life after stapled hemorrhoidopexy vs Doppler-guided HAL-RAR: a propensity score matching analysis. *Int J Colorectal Dis*. 2024 Feb 22;39(1):30. doi: 10.1007/s00384-024-04603-0.
8. Bouchard D, Abramowitz L, Castinel A, Suduca JM, Staumont G, Soudan D, Devulder F, Pigot F, Varastet M, Ganansia R; Groupe de Recherche En Proctologie de la Société Nationale Française de Colo-Proctologie (GREP); Club de Réflexion des cabinets et

- Groupe d'Hépatogastroentérologie (CREGG). One-year outcome of haemorrhoidectomy: a prospective multicentre French study. *Colorectal Dis.* 2013 Jun;15(6):719-26. doi: 10.1111/codi.12090.
9. Sun XW, Xu JY, Zhu CZ, Li SJ, Jin LJ, Zhu ZD. Analysis of factors impacting postoperative pain and quality of life in patients with mixed hemorrhoids: A retrospective study. *World J Gastrointest Surg.* 2024 Mar 27;16(3):731-739. doi: 10.4240/wjgs.v16.i3.731.
  10. Carvajal López F, Hoyuela Alonso C, Juvany Gómez M, Troyano Escribano D, Trias Bisbal MA, Martrat Macià A, Ardid Brito J. Prospective Randomized Trial Comparing HAL-RAR Versus Excisional Hemorrhoidectomy: Postoperative Pain, Clinical Outcomes, and Quality of Life. *Surg Innov.* 2019 Jun;26(3):328-336. doi: 10.1177/1553350618822644.
  11. Tsunoda A, Takahashi T, Kusanagi H. A prospective randomized trial of transanal hemorrhoidal dearterialization with mucopexy versus ultrasonic scalpel hemorrhoidectomy for grade III hemorrhoids. *Tech Coloproctol.* 2017 Aug;21(8):657-665. doi: 10.1007/s10151-017-1673-1.
  12. Johannsson HÖ, Pählman L, Graf W. Functional and structural abnormalities after milligan hemorrhoidectomy: a comparison with healthy subjects. *Dis Colon Rectum.* 2013 Jul;56(7):903-8. doi: 10.1097/DCR.0b013e31828deb6d.
  13. Mallmann C, Langenbach MR, Florescu RV, Köhler A, Barkus J, Ritz JP, Gebauer F, Lefering R, Boenicke L. Parameters predicting postoperative pain and quality of life after hemorrhoidectomy: follow-up results from a prospective multicenter randomized trial. *Int J Colorectal Dis.* 2023 Nov 3;38(1):262. doi: 10.1007/s00384-023-04557-9.
  14. Turrentine FE, Wang H, Simpson VB, Jones RS. Surgical risk factors, morbidity, and mortality in elderly patients. *J Am Coll Surg.* 2006 Dec;203(6):865-77. doi: 10.1016/j.jamcollsurg.2006.08.026.