

Original Research Article

Comparison of efficacy of open hemorrhoidectomy versus stapled haemorrhoidopexy in grade 3 and above internal haemorrhoid patients

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ABSTRACT

Background: Haemorrhoidal disease is a common anorectal condition, with Grade III and IV haemorrhoids often requiring surgical intervention. Open haemorrhoidectomy (Milligan-Morgan technique) has long been the standard procedure but is associated with significant postoperative pain and prolonged recovery. Stapled haemorrhoidopexy has emerged as a minimally invasive alternative with the potential for improved postoperative outcomes. This study aimed to compare the efficacy and postoperative outcomes of open haemorrhoidectomy and stapled haemorrhoidopexy in patients with advanced haemorrhoids.

Methods: This prospective observational study was conducted at a tertiary care center over a period of one year (July 2023 to July 2024). A total of 84 patients with Grade III and IV internal haemorrhoids were included and equally divided into two groups: open haemorrhoidectomy (n=42) and stapled haemorrhoidopexy (n=42). Outcomes assessed included postoperative pain using the Visual Analogue Scale (VAS) at 12, 24, and 48 hours, postoperative bleeding, duration of hospital stay, and time to return to work. Statistical analysis was performed using appropriate tests, with $p < 0.05$ considered significant.

Results: Stapled haemorrhoidopexy demonstrated significantly lower postoperative pain scores at all time intervals compared to open haemorrhoidectomy ($p < 0.001$). The stapled group experienced minimal postoperative bleeding (mean 0.36 days vs 3.14 days), shorter hospital stays (mean 0.74 vs 2.55 days), and earlier return to work (mean 3.33 vs 7.43 days). In contrast, open haemorrhoidectomy was associated with higher pain intensity, prolonged bleeding, and delayed recovery.

Conclusions: Stapled haemorrhoidopexy is superior to open haemorrhoidectomy in terms of reduced postoperative pain, minimal bleeding, shorter hospital stay, and faster return to normal activities. It can be considered a preferred surgical option for the management of Grade III and IV haemorrhoids, provided adequate surgical expertise is available.

Keywords: Haemorrhoids, Stapled haemorrhoidopexy, Open haemorrhoidectomy, Postoperative pain, Surgical outcomes

INTRODUCTION

Haemorrhoids (piles) are normal vascular cushions in the anal canal that aid continence and facilitate stool passage. They comprise blood vessels, connective tissue, and smooth muscle fibres. Haemorrhoidal disease occurs when these cushions become enlarged, inflamed, or prolapsed, causing bleeding, pain, itching, prolapse, and

discomfort. Common risk factors include aging, pregnancy, chronic constipation, prolonged straining, and genetic predisposition.¹⁻³

Classification of haemorrhoids

Internal haemorrhoids-above the dentate line; painless. Grade I-bleeding without prolapse. Grade II-prolapse

with spontaneous reduction. Grade III-prolapse requiring manual reduction. Grade IV-irreducible prolapse, often thrombosed.

External haemorrhoids-below the dentate line; painful with swelling and itching.

Prolapsed haemorrhoids-protrude outside the anal canal. Thrombosed haemorrhoids-acute painful swelling due to clot formation.

Mixed haemorrhoids-combined internal and external components.

Bleeding/non-bleeding haemorrhoids-present with bleeding or pain, irritation, and discomfort. Chronic haemorrhoids-recurrent or persistent disease.⁴⁻⁶

Etiology and risk factors

Haemorrhoids result from increased anorectal venous pressure and weakening of supporting tissues. Major risk factors include chronic constipation or diarrhoea, prolonged straining, pregnancy, obesity, aging, prolonged sitting or standing, low-fibre diet, heavy lifting, anal trauma and genetic predisposition.⁷⁻⁸

Etiological theories

Sliding anal canal theory: Weakening of supporting tissues causes prolapse of anal cushions.

Degenerative theory: Age-related degeneration of connective tissue and muscle support leads to vascular enlargement and prolapse.⁹

Clinical presentation

Common symptoms include: bright red rectal bleeding, pain (especially external haemorrhoids), swelling or anal lump, itching and irritation, prolapse during defecation, mucous discharge, feeling of incomplete evacuation

Complications

Complications include thrombosis, anal fissure, persistent bleeding, infection, and worsening prolapse.¹⁰

Surgical management

Haemorrhoidectomy is the definitive treatment for advanced or symptomatic haemorrhoids. Open haemorrhoidectomy (Milligan–Morgan): Wound left open; effective but associated with greater postoperative pain.¹¹

Closed haemorrhoidectomy (Ferguson): Wound closed primarily; less pain and faster healing.¹²

Minimally invasive techniques: Laser haemorrhoidectomy, Doppler-guided haemorrhoidal

artery ligation (DG-HAL), transanal haemorrhoidal dearterialization (THD), and stapled haemorrhoidopexy (PPH) reduce postoperative pain and hasten recovery.¹³⁻¹⁶

Complications of surgery

Early complications include pain, bleeding, urinary retention, infection, and difficulty in defecation. Late complications include anal stenosis, faecal incontinence, delayed wound healing, and recurrence.

Prevention and management

Careful patient selection, bowel regulation, meticulous surgical technique, and appropriate postoperative care help reduce complications and recurrence.¹⁷

Healing and quality of life

Healing progresses through granulation, epithelialization, and tissue remodelling. Stapled haemorrhoidopexy generally provides less postoperative pain and faster recovery than open haemorrhoidectomy, while both procedures significantly improve symptoms and quality of life when appropriately indicated.

METHODS

Prospective observational study

The study was conducted in the Department of General Surgery, GMERS Medical college and General hospital, Gandhinagar, India, from July 2023 to July 2024. For present study, required sample size will be 42 patients in each group which is rounded off to 84 patients in each group.

Data analysis

Data entry will be done using Microsoft Excel or similar software and data analysis will be performed using SPSS or similar software.

Inclusion criteria

Patients of either gender aged 18 to 65 years diagnosed with third or fourth-degree haemorrhoids were included in the study. Eligible participants were those who were willing to undergo the proposed surgical procedure and provided written informed consent to participate in the study.

Exclusion criteria

Patients with first or second-degree haemorrhoids, external haemorrhoids, mixed (internal and external) haemorrhoids, or thrombosed piles were excluded from the study. Patients with a history of previous surgical intervention for haemorrhoids, anal fissure, perianal abscess, anal fistula, anal malignancy, or portal

hypertension were also excluded. In addition, pregnant women, patients with neurological disorders, renal dysfunction (serum creatinine >1.2 mg/dL), liver disease, or bleeding disorders (INR >2) were not included in the study.

RESULTS

Gender distribution

Out of a total of 84 study participants, the majority were male (83%, n=70), while females constituted 17% (n=14). This indicates a clear male predominance in the study population.

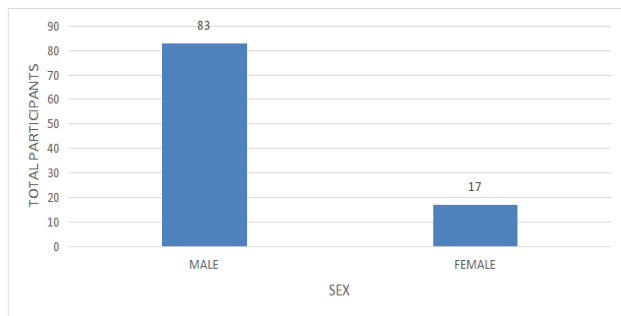


Figure 1: Gender distribution among study participants.

Types of surgeries performed

Among the 84 participants, surgical procedures were equally distributed between stapled haemorrhoidopexy and open haemorrhoidectomy, with 42 patients (50%)

undergoing each technique. This equal allocation enables a balanced comparison of postoperative outcomes between the two groups.

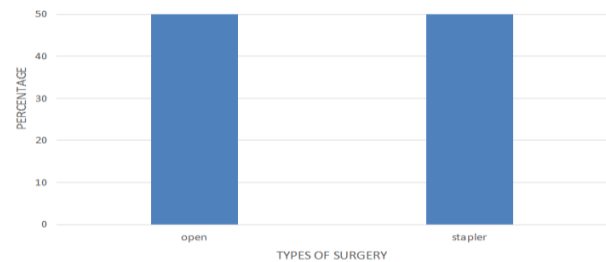


Figure 2: Types of surgeries performed among study participants.

Postoperative pain assessment (VAS Scores)

The analysis of Visual Analogue Scale (VAS) pain scores demonstrates a clear difference in postoperative pain between the two surgical groups. Patients who underwent stapled haemorrhoidopexy predominantly experienced mild to moderate pain, with 31% reporting mild pain and 64% moderate pain, while only 5% reported severe pain. In contrast, patients who underwent open haemorrhoidectomy experienced higher pain intensity, with 48% reporting moderate pain and a notable 52% experiencing severe pain, and none reporting mild or no pain. Overall, these findings indicate that stapled haemorrhoidopexy is associated with significantly lower postoperative pain compared to open haemorrhoidectomy, suggesting better patient comfort in the immediate postoperative period (Table 1).

Table 1: VAS pain scores after surgery.

Count	Type of surgery N (%)		Total			
	Stapled	Open		Stapled	Open	
VAS After 12 hours Surgery	0	0	0	0	0	No pain
	1-3	13 (31)	13 (51)	13 (31)	0	Mild
	4-6	27 (64)	47 (57)	27 (64)	20 (48)	Moderate
	7-8	2 (5)	23 (27)	2 (5)	22 (52)	Severe
	9-10	1 (2)	1 (1)			
Total		42(50%)	42 (50)	84 (100)		
Mean						
P value (t-Test)			0.0001			

Table 2: VAS pain scores after 12 hours of surgery.

Count	Type of surgery N (%)		Total			
	Stapled	Open		Stapled	Open	
VAS after 12 hours surgery	0	4 (9)	4 (5)	4 (9)	0	No pain
	1-3	26 (62)	26 (62)	26 (62)	0	Mild
	4-6	12 (29)	53 (63)	12 (29)	41(98)	Moderate
	7-8	0	1 (1)	0	1(2%)	Severe
	9-10	0	0			
Total		42(50%)	42 (50)	84 (100)		
Mean				2.64	5.10	
P value (t-Test)			0.0001			

Postoperative pain at 12 Hours (VAS Scores)

The VAS pain assessment at 12 hours post-surgery shows a significant difference between the two groups. In the stapled haemorrhoidopexy group, 9% of patients reported no pain, 62% had mild pain, and 29% experienced moderate pain, with no cases of severe pain. In contrast, the open haemorrhoidectomy group reported higher pain levels. No patients in this group experienced no pain or mild pain. A majority, 98%, reported moderate pain. Additionally, 2% of patients experienced severe pain. These findings indicate that stapled haemorrhoidopexy results in lower pain levels at 12 hours. Overall, patients undergoing open surgery experienced predominantly moderate pain compared to milder pain in the stapled group (Table 2).

Postoperative pain at 24 hours (VAS Scores)

At 24 hours post-surgery, patients in the stapled haemorrhoidopexy group showed significantly lower pain levels, with 26% reporting no pain and 62% experiencing mild pain. Only 12% of patients in this group reported moderate pain, and none had severe pain. In contrast, the open haemorrhoidectomy group had higher pain levels, with 79% experiencing moderate pain and 2% severe pain. A small proportion (19%) reported mild pain, while none were pain-free. Overall, stapled haemorrhoidopexy is associated with minimal to mild pain, whereas open surgery results in predominantly moderate pain at 24 hours (Table 3).

Table 3: VAS pain scores after 24 hours surgery.

Count		Type of surgery N (%)		Total			
		Stapled	Open		Stapled	Open	
VAS After 24 Hours Surgery	0	11 (26)	0	11 (13)	11 (26)	0	No pain
	1-3	26 (62)	8 (19)	34 (40)	26 (62)	8 (19)	Mild
	4-6	5 (12)	33 (79)	38 (46)	5 (12)	33 (79)	Moderate
	7-8	0	1 (2)	1 (1)	0	1 (2)	Severe
	9-10	0	0	0			
Total		42 (50)	42 (50)	84 (100)			
Mean					1.79	4.19	
P value (t-Test)				0.0001			

Table 4: VAS pain scores after 48 hours surgery.

Count		Type of surgery N (%)		Total			
		Stapled	Open		Stapled	Open	
VAS After 48 hours Surgery	0	14 (33)	3 (6)	17 (20)	14 (33)	3 (7)	No pain
	1-3	28 (67)	21 (50)	49 (59)	28 (67)	21 (50)	Mild
	4-6	0	18 (42)	18 (21)	0	18 (43)	Moderate
	7-8	0	1 (2)	0	0	0	Severe
	9-10	0	0	0			
Total		42 (50)	42 (50)	84 (100)			
Mean					1.02	2.95	
P value (t-Test)				0.0001			

Postoperative pain at 48 hours (VAS Scores)

At 48 hours post-surgery, the stapled haemorrhoidopexy group showed further reduction in pain, with 33% reporting no pain and 67% experiencing only mild pain. No patients in this group reported moderate or severe pain. In the open haemorrhoidectomy group, 7% had no pain and 50% reported mild pain. However, 43% of patients continued to experience moderate pain, with no cases of severe pain. Overall, stapled haemorrhoidopexy demonstrates superior pain relief, while open surgery patients still experience mild to moderate discomfort at 48 hours.

Postoperative bleeding in relation to type of haemorrhoidectomy

Postoperative bleeding was significantly lower in the stapled haemorrhoidopexy group compared to the open haemorrhoidectomy group. On the day of surgery, 77% of stapled patients had no bleeding, with only minimal cases reported in subsequent days. In contrast, patients undergoing open surgery experienced higher rates of bleeding, particularly from postoperative days 1 to 5. Bleeding in the open group peaked during the early postoperative period and gradually decreased over time. No bleeding was observed in either group by the sixth postoperative day, except for a few late cases in the open

group. Overall, increased bleeding in open haemorrhoidectomy is attributed to the presence of a raw

wound surface prone to irritation during bowel movements (Table 5).

Table 5: Post operative day of bleeding relation to the type of haemorrhoidectomy.

		Type of surgery N (%)		Total
		Stapled	Open	
Total number of days of bleeding complaints from surgical site	No bleeding	32 (77)	0	32 (39)
	1	6 (14)	8 (19)	14 (17)
	2	3 (7)	10 (24)	13 (15)
	3	1 (2)	9 (21)	10 (12)
	4	0	7 (17)	7 (8)
	5	0	5 (12)	5 (6)
	6	0	0	0
	7	0	1 (2)	1 (1)
	>7	0	2 (5)	2 (2)
Total		42 (50)	42 (50)	84 (100)
Mean		0.36	3.14	
P value (t-Test)		0.0001		

Duration of hospitalization (DOH) in relation to type of haemorrhoidectomy

The duration of hospitalization was shorter in patients undergoing stapled haemorrhoidopexy compared to open haemorrhoidectomy. A significant proportion of stapled patients (42%) were discharged on the same day, whereas none from the open group had same-day discharge. Most

stapled patients were discharged within the first postoperative day, indicating faster recovery. In contrast, the majority of open surgery patients required 2–4 days of hospitalization. A small number of open surgery patients required up to 6–7 days for discharge. Overall, stapled haemorrhoidopexy is associated with reduced hospital stay compared to open haemorrhoidectomy (Table 6).

Table 6: Post operative day of bleeding relation to the type of haemorrhoidectomy 8 days of hospitalization (DOH) after the surgery in relation to the type of haemorrhoidectomy.

Doh in relation to type of surgery				
Count		Type of surgery N (%)		Total
		Stapled	Open	
DOH	Same day of surgery	18 (42)	0	18 (21)
	1	20 (47)	1 (2)	21 (25)
	2	3 (7)	26 (64)	29 (35)
	3	2 (4)	8 (20)	10 (12)
	4	0	4 (10)	4 (5)
	5	0	0	0
	6	0	1 (2)	1 (1)
	7	0	1 (2)	1 (1)
	More than 7 days	0	0	0
Total		42 (50)	42 (50)	84 (100)
Mean		0.74	2.55	
P value (t-Test)		0.0001		

Return to work after surgery in relation to type of haemorrhoidectomy

Return to work was significantly earlier in patients undergoing stapled haemorrhoidopexy compared to open haemorrhoidectomy. No patients in either group resumed work within the first postoperative day. In the stapled

group, most patients returned to work by days 2–4, with a peak on day 3 (45%). In contrast, open surgery patients showed delayed recovery, with most returning between days 5–10. A considerable proportion of open surgery patients resumed work as late as day 7 or beyond. Overall, stapled haemorrhoidopexy allows faster return to normal activities compared to open haemorrhoidectomy (Table 7).

Table 7: Days of return to work after the surgery according to types of surgery.

Days of return to work in relation to type of surgery				
Count		Type of surgery N (%)		Total
		Stapled	Open	
DOD	Same day of surgery	0	0	0
	1	0	0	0
	2	7 (17)	0	7 (8)
	3	19 (45)	0	19 (23)
	4	8 (19)	1 (2)	9 (11)
	5	5 (12)	10 (23)	15 (18)
	6	2 (5)	4 (10)	4 (5)
	7	1 (2)	15 (36)	16 (19)
	8	0	3 (7)	3 (4)
	9	0	0	0
	10	0	7 (17)	7 (8)
	More than 10 days	0	2 (5)	2 (2)
Total		42 (50)	42 (50)	84 (100)
Mean		3.33	7.43	
P value (t-Test)		0.0001		

DISCUSSION

This prospective, randomized controlled study conducted at GMERS Medical College and General Hospital, Gandhinagar, compared postoperative outcomes between open haemorrhoidectomy and stapled haemorrhoidopexy in 84 patients.

Gender distribution

In the Present study, male patients constituted 83% (70/84) of the study population, whereas female patients accounted for 17% (14/84), demonstrating a marked male predominance among patients undergoing surgery for Grade III and Grade IV internal haemorrhoids. This finding is consistent with the epidemiological pattern reported in previous studies, where haemorrhoidal disease requiring surgical intervention has been observed more frequently in males. The higher prevalence among men may be attributed to occupational factors involving prolonged sitting or heavy physical work, dietary habits, smoking, alcohol consumption, delayed healthcare-seeking behaviour, and greater exposure to risk factors such as chronic constipation and increased intra-abdominal pressure.

Our findings are comparable with those reported by Ganio et al reported that the majority of their study participants were male, with males constituting approximately 60-75% of the study population. More recent studies from India have also demonstrated a similar gender distribution.¹⁸ Bhat et al reported that males accounted for nearly 75-85% of patients undergoing surgery for advanced haemorrhoids, which closely resembles the findings of the present study.¹⁹

Types of surgeries performed

In the Present study, 84 patients with Grade III and Grade IV internal haemorrhoids were equally allocated to undergo either stapled haemorrhoidopexy (n=42, 50%) or open haemorrhoidectomy (n=42, 50%). This equal distribution ensured comparable baseline group sizes, thereby minimizing selection bias and allowing a reliable comparison of postoperative pain, bleeding, duration of hospital stay, return to work, and postoperative complications between the two surgical techniques.

The equal allocation of patients is consistent with the methodology adopted in several randomized controlled trials comparing stapled haemorrhoidopexy with conventional open haemorrhoidectomy. Mehigan et al randomized patients into stapled and Milligan–Morgan haemorrhoidectomy groups with nearly equal sample sizes, ensuring unbiased comparison of postoperative outcomes.²⁰ Similarly, Rowsell et al conducted a prospective randomized trial with balanced treatment arms, reporting significantly less postoperative pain and earlier recovery in the stapled group.²¹

Postoperative pain assessment (VAS scores) after surgery at 12 hours, 24 hours and 48 hours

The present study demonstrated that stapled haemorrhoidopexy was associated with significantly lower postoperative pain than open haemorrhoidectomy at all evaluated time points, including the immediate postoperative period, 12 hours, 24 hours and 48 hours. Patients in the stapled group predominantly experienced mild pain with rapid reduction in pain scores over time, whereas patients undergoing open haemorrhoidectomy

continued to experience predominantly moderate to severe pain during the early postoperative period. These findings highlight the advantage of stapled haemorrhoidopexy in improving postoperative comfort and facilitating early recovery.

The results of the present study are comparable with those reported by Singh et al, who compared stapled haemorrhoidopexy with conventional open haemorrhoidectomy in patients with Grade III and Grade IV haemorrhoids. They observed significantly lower postoperative VAS pain scores in the stapled group at 24 and 48 hours after surgery. Patients who underwent stapled haemorrhoidopexy also required fewer analgesics and achieved earlier ambulation compared with those treated by open haemorrhoidectomy. The authors attributed the reduced postoperative pain to the placement of the staple line above the dentate line, thereby avoiding injury to the pain-sensitive anoderm. These observations closely mirror the findings of the present study, where pain was consistently lower in the stapled group throughout the first 48 postoperative hours.²²

Similarly, Gupta et al reported that patients undergoing stapled haemorrhoidopexy experienced significantly less postoperative pain than those undergoing open haemorrhoidectomy. Their study demonstrated that the stapled procedure resulted in lower VAS scores, reduced analgesic requirements, earlier mobilization, shorter hospital stay, and faster return to routine activities. These findings are in agreement with the present study, in which a greater proportion of patients in the stapled group were pain-free or experienced only mild pain by 24-48 hours, whereas a substantial proportion of patients in the open haemorrhoidectomy group continued to report moderate pain.²³

The similarity between the present study and these Indian studies reinforces the evidence that stapled haemorrhoidopexy provides superior postoperative pain control compared with open haemorrhoidectomy. The reduced pain associated with the stapled technique is likely due to limited tissue dissection, preservation of the anoderm, and avoidance of wounds in the richly innervated anal canal. Consequently, patients experience improved postoperative comfort, reduced analgesic requirements, earlier mobilization, shorter hospitalization, and a quicker return to normal daily activities. These consistent findings across Indian studies support stapled haemorrhoidopexy as an effective and patient-friendly surgical option for the management of Grade III and Grade IV internal haemorrhoids.

Postoperative bleeding in relation to type of haemorrhoidectomy

Postoperative bleeding is a common early complication following haemorrhoid surgery and is an important determinant of patient recovery and postoperative morbidity. In the present study, patients who underwent

stapled haemorrhoidopexy experienced significantly less postoperative bleeding than those who underwent open haemorrhoidectomy. On the day of surgery, 77% of patients in the stapled group had no postoperative bleeding, and only a small proportion experienced minimal bleeding during the subsequent postoperative days. In contrast, the open haemorrhoidectomy group demonstrated a higher incidence of postoperative bleeding, particularly between postoperative days 1 and 5, with gradual resolution thereafter. By the sixth postoperative day, bleeding had ceased in almost all patients, although a few patients in the open group continued to experience minor bleeding.

The reduced incidence of postoperative bleeding following stapled haemorrhoidopexy is explained by the operative technique. The circular stapling device excises a circumferential ring of rectal mucosa above the dentate line while simultaneously creating a secure staple line that provides effective haemostasis. In contrast, open haemorrhoidectomy leaves raw perianal wounds that remain exposed to mechanical trauma during defecation, increasing the likelihood of postoperative bleeding until complete wound healing occurs.

The findings of the present study are consistent with those reported by Ho et al, who observed significantly lower postoperative bleeding following stapled haemorrhoidopexy compared with conventional haemorrhoidectomy. They attributed this advantage to effective staple-line haemostasis and minimal tissue trauma.

Similarly, Palimento et al demonstrated that patients undergoing stapled haemorrhoidopexy experienced fewer episodes of postoperative bleeding and required fewer postoperative interventions than those undergoing conventional open haemorrhoidectomy. The authors concluded that preservation of the anoderm and the absence of large open wounds contributed to improved postoperative outcomes.²⁴

A systematic review by Nisar et al also reported that stapled haemorrhoidopexy was associated with reduced early postoperative bleeding, lower postoperative pain, and shorter hospital stay compared with conventional haemorrhoidectomy. Although the review noted a slightly higher long-term recurrence rate with stapled haemorrhoidopexy in some studies, the early postoperative recovery was consistently superior.²⁵

Duration of hospitalization (DOH) in relation to type of haemorrhoidectomy

The present study demonstrated that patients undergoing stapled haemorrhoidopexy had a significantly shorter duration of hospitalization than those undergoing open haemorrhoidectomy. Nearly half of the patients in the stapled group were discharged on the day of surgery, while the majority were discharged within the first

postoperative day. In contrast, patients undergoing open haemorrhoidectomy required a longer hospital stay, with most remaining hospitalized for 2-4 days because of postoperative pain, wound care requirements, and delayed mobilization.

These findings are consistent with those of Wilson et al, who reported that patients treated with stapled haemorrhoidopexy had significantly shorter hospital stays and resumed normal activities earlier than those undergoing conventional haemorrhoidectomy. The authors attributed these benefits to reduced postoperative pain and minimal perianal wound trauma.²⁶

Similarly, Hetzer et al observed that stapled haemorrhoidopexy allowed earlier discharge and faster postoperative recovery compared with open haemorrhoidectomy. Their study emphasized that reduced tissue injury and effective haemostasis facilitated rapid mobilization and decreased the need for prolonged inpatient care.²⁷

Return to work after surgery in relation to type of haemorrhoidectomy

Early return to normal daily activities and work is an important indicator of successful postoperative recovery and significantly influences patient satisfaction and socioeconomic outcomes. In the present study, patients undergoing stapled haemorrhoidopexy resumed work significantly earlier than those undergoing open haemorrhoidectomy. Most patients in the stapled group returned to work within 2-4 days, with the highest proportion (45%) resuming work on postoperative day 3. In contrast, patients who underwent open haemorrhoidectomy generally returned to work between 5 and 10 days, with a considerable proportion requiring seven or more days before resuming routine activities. The earlier return to work observed in the stapled group reflects reduced postoperative pain, less wound-related morbidity, and faster functional recovery.

The findings of the present study are consistent with those reported by Cheetham et al, who found that patients undergoing stapled haemorrhoidopexy returned to normal daily activities significantly earlier than those treated with conventional haemorrhoidectomy. The authors attributed this advantage to reduced postoperative pain and minimal trauma to the pain-sensitive anoderm, allowing patients to resume routine activities sooner.

Similarly, Ortiz et al demonstrated that stapled haemorrhoidopexy resulted in faster postoperative recovery and earlier return to work than open haemorrhoidectomy. Patients in the stapled group required fewer analgesics, experienced less discomfort during defecation, and regained normal functional status more rapidly.²⁸

A systematic review by Laughlan et al also concluded that stapled haemorrhoidopexy was associated with a significantly shorter time to return to normal activities and employment compared with conventional excisional haemorrhoidectomy. The review highlighted that the principal factors contributing to earlier recovery were lower postoperative pain scores, shorter hospital stay, and reduced wound-related complications.²⁹

Limitations

This study has several limitations. Being a single-center study, its findings may have limited generalizability to other settings. The relatively small sample size (n=84) may reduce statistical power. Lack of long-term follow-up prevents assessment of recurrence and late complications. Pain evaluation based on patient-reported scores introduces subjective bias. Additionally, variations in surgeon experience were not accounted for, which may have influenced outcomes. Larger multicenter studies with longer follow-up and more objective outcome measures are recommended.

CONCLUSION

The Present prospective comparative study demonstrated that stapled haemorrhoidopexy is a safe and effective alternative to open haemorrhoidectomy for the management of Grade III and Grade IV internal haemorrhoids. Both surgical techniques were effective in treating advanced haemorrhoidal disease; however, stapled haemorrhoidopexy offered significant advantages in terms of early postoperative recovery. Patients undergoing stapled haemorrhoidopexy experienced significantly lower postoperative pain, reduced postoperative bleeding, shorter duration of hospitalization, and earlier return to work compared with those undergoing open haemorrhoidectomy. These benefits can be attributed to the minimally invasive nature of the stapled procedure, which preserves the pain-sensitive anoderm, minimizes tissue trauma, and provides effective haemostasis. Consequently, patients achieved faster mobilization, greater postoperative comfort, and quicker resumption of normal daily activities.

In contrast, although open haemorrhoidectomy remains an effective and definitive surgical treatment, it was associated with greater postoperative pain, prolonged wound healing, increased postoperative bleeding, longer hospital stays, and delayed return to normal activities. Overall, the findings of the present study support the use of stapled haemorrhoidopexy as the preferred surgical option for appropriately selected patients with Grade III and Grade IV internal haemorrhoids, particularly when rapid recovery, reduced postoperative morbidity, and improved patient satisfaction are desired. Nevertheless, careful patient selection, adequate surgical expertise, and long-term follow-up remain essential to ensure optimal outcomes and to evaluate recurrence and late postoperative complications.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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