



Comparison of Hemorrhoidectomy alone Vs Hemorrhoidectomy with Lateral Sphincterotomy in Terms of Post-Operative Pain Relief

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ABSTRACT

Objective: To compare hemorrhoidectomy with and without lateral internal sphincterotomy in terms of postoperative pain relief. **Study Design:** Randomized control trial. **Settings:** Department of surgery, Allied hospital Faisalabad Pakistan. **Duration:** January 2018 to June 2018. **Methodology:** This study was a randomized control trial, cases from both genders were selected as per inclusion criteria, Total 60 patients were selected & divided into two groups by random numbers, each group contained 30 patients, group A patients underwent Hemorrhoidectomy alone while group B patients underwent Hemorrhoidectomy with Lateral sphincterotomy, pain relief in both groups was compared at 24 hours postoperatively, *P-value* of less than 0.05 was taken significant. **Results:** Among 60 patients 35 (58.34%) were males while 25 (41.66%) were females, mean age of group A patients was 50.40±11.96 years and of group B it was 43.26±13.45 years. Four (13.33%) out of 30 patients in group A had pain relief, while in group B 19 (63.33%) out of 30 patients had pain relief at 24 hours. **Conclusion:** Hemorrhoidectomy with lateral sphincterotomy is better for treatment of 3rd degree, 4th degree internal hemorrhoids & external hemorrhoids.

Keywords: Hemorrhoidectomy, Lateral sphincterotomy, Pain relief.

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INTRODUCTION

The term "hemorrhoids" refers to anal cushions.¹ Hemorrhoids effect from 4.4% to 36.4% of general population.² Hemorrhoids may be internal or external hemorrhoids.³ Internal hemorrhoids originate proximal to dentate line and are divided to 4 degrees, First degree presents as painless bleeding, 2nd degree prolapse through the anus and reduce spontaneous, 3rd degree prolapse through the anal canal and require manually reduction, 4th degree bleed, prolapse but cannot reduced³. External hemorrhoids are covered proximally by anoderm and distally by skin, both of which are sensitive to pain.⁴

For first and second degree hemorrhoids, simple outpatient procedures including rubber band ligation, infrared coagulation, injection sclerotherapy and cryotherapy are useful. Hemorrhoidectomy is reserved for 3rd, 4th degree internal hemorrhoids or external ones.⁵ Around 10% to 15% of patients with hemorrhoids eventually require surgical excision.⁶

Hemorrhoidectomy is associated with severe postoperative pain which is due to reflex spasm of internal anal sphincter.^{7,8}

Various methods have been tried in order to reduce post hemorrhoidectomy pain. Over the time, Lateral internal sphincterotomy has been taken as one of the valid addition to the hemorrhoidectomy for a better postoperative pain relief. Lateral internal sphincterotomy provides post hemorrhoidectomy pain relief by reducing the hypertonicity of the internal anal sphincter.⁹

In a recently published local study, 98.2% patients experienced pain after hemorrhoidectomy without lateral internal

sphincterotomy in first 48 hours as compared to 44.5% patients who experienced pain after hemorrhoidectomy with lateral internal sphincterotomy in first 48 hours.¹⁰

Objective: In this study our aim was to compare open hemorrhoidectomy with and without lateral internal sphincterotomy in terms of postoperative pain relief.

METHODOLOGY

Study Design: Randomized control trial.

Settings: Department of Surgery Allied hospital Faisalabad.

Duration: 6 months from January 2018 to June 2018

Sample Size: 60 (30 in each group)

Inclusion Criteria: All the patients with following common properties were included in the study.

- Patients of both gender
- Age between 18-60 years
- Patients with 3rd or 4th degree hemorrhoids (As per operational definition)
- External hemorrhoids (As per operational definition)

Exclusion Criteria: Patients with following properties were excluded from the study.

- Recurrent hemorrhoids
- Perianal fistula
- Fissure in Ano
- Perianal Abscess
- Polypoid lesions

(All of above were diagnosed on clinical grounds).

Methods: After the approval the study from hospital ethics committee an informed consent was taken from all the included cases. History, examination and baseline workup was completed, Ultrasound abdomen was performed in all patients to rule out any intra-abdominal pathology especially chronic liver disease and ascites, ECG and Chest X-rays were done as part of pre-operative anesthesia work up.

Patients were divided randomly into two groups by using computer generated random numbers. Group 1 included the patients who underwent hemorrhoidectomy without lateral internal sphincterotomy & group 2 underwent hemorrhoidectomy with lateral internal sphincterotomy. Patients in either group were explained about the nature of particular procedure adopted for them and an informed consent was obtained, all the cases were performed by same surgeon.

Pain assessment using numeric pain scale was recorded after 24 hours postoperatively & pain relief was considered in patients who achieved a score from 0 to 5, a score more than 5 was taken as no pain relief. Post operatively all the patients were kept nothing by mouth (NPO) for at least 4 hours, injection Flagyl 400 mg IV x 8 hourly was given for 3 days, all the patients were advised to take SITZ bath for 5 days. On discharge, patients were advised to take high fiber diet. All the patients were followed in OPD for 3 weeks.

Data Analysis Procedure: All the data was entered and analyzed on SPSS 20. Descriptive statistics were calculated for all variables. Mean and standard deviation was calculated for quantitative variables like age and pain score. Frequency and percentages were calculated for all the qualitative variables like sex and postoperative pain relief after both the modalities of treatment. Chi-Square test was used to compare postoperative pain relief. P value less than 0.05 was taken as significant.

RESULTS

In the period of 6 months 60 patients of 3rd degree, 4th degree & external hemorrhoids were enrolled in the study, 30 patients (group A) underwent open hemorrhoidectomy alone and 30 patients (group B) underwent open hemorrhoidectomy with lateral internal sphincterotomy.

Of total 60 patients 35 (58.4%) were males and 25 (41.6%) were females. There were 19 (63.3%) male and 11 (36.7%) female patients in group A while in group B there were 16 (53.4%) male and 14 (46.6%) female patients (Table 1).

Table 1: Distribution of patients by gender

Gender	Group A (n=30)		Group B (n=30)		Total (n=60)	P-value
	No.	%	No.	%		
Male	19	63.3	16	53.4	35 58.34%	0.01
Female	11	36.7	14	46.6	25 41.66%	
Total	30	100	30	100	60	

Patients from 20 to 70 years were selected as per inclusion criteria. In group A mean age was 50.40±11.96 years while in group B it was 43.26±13.45 years.

Out of total 60 patients, 23 (38.4%) had pain relief at 24 hours post operatively, while 37 (61.6%) had no pain relief (*P-value*=0.01), Of 23 patients who had pain relief 4 (17.4%) were from group A and 19 (82.6%) were from group B (Table 2).

Table 2: Distribution by pain relief at 24 hours postoperatively

Pain Relief within 24 hours	Group A (n=30)		Group B (n=30)		Total (n=60)	P-value
	No.	%	No.	%		
Yes	4	13.3	19	63.3	23 38.34%	0.01
No	26	86.7	11	36.7	37 61.66%	

Chi-Square = 15.864, P-Value = 0.01

DISCUSSION

Hemorrhoids are common entity in the general population and in clinical practice. Many anorectal problems like fissures, fistulae, abscesses, or irritation and itching (pruritus ani), have similar symptoms and are incorrectly referred to as hemorrhoids. Although many people have hemorrhoids, not all experience symptoms.¹¹ Commonest symptom of internal hemorrhoids is bright red blood covering the stool, on toilet paper, in the toilet bowl or a red streak on one side of hard stool. However, an internal hemorrhoid may protrude through the anus outside the body, become irritated and painful. Constipation, excessive straining, rubbing, or cleaning around the anus may cause irritation with bleeding and/or itching, which may produce a vicious cycle of symptoms. Draining mucus can cause itching. No sex predilection is known, although men are more likely to seek treatment.¹² The prevalence of hemorrhoids increases with age, with a peak in persons aged 45-65 years.¹² Pain is almost a constant feature after hemorrhoidectomy, which makes patients defer seeking care for prolapsing, bleeding, and uncomfortable piles. Eisenhammer was the first to propagate the idea that post hemorrhoidectomy pain is due to spasm of the internal sphincter and described that its division through one of the hemorrhoid wounds is certainly an effective way to lessen postoperative pain.¹³ In a few controlled trials it has been observed that hemorrhoidectomy combined with lateral internal sphincterotomy leads to decreased postoperative pain and early wound healing. LIS decreases the spasm of internal sphincter therefore it leads to decreased pain after anal procedures.¹¹⁻¹³ In a study the number of patients who suffered from postoperative pain decreased significantly when performing Lateral internal sphincterotomy with hemorrhoidectomy going to 10.45% as compared to 28.8% in whom open hemorrhoidectomy alone was done.¹¹

Two treatment modalities are being compared in this study that is open hemorrhoidectomy and hemorrhoidectomy with lateral internal sphincterotomy in terms of postoperative pain relief at

24 hours. In our study males dominated with a male to female ratio of 1.4 males to 1 female. Majority of people belonged to 4th decade of life with a mean age of 47 years. Similar observations were made in the study of Murie *et al* in which this ratio was 2:1, which is comparable to our study.¹⁴ This male preponderance is likely to be due to the social taboos in our setup and the female reluctance to be examined by a male surgeon leading to males seeking medical advice regarding hemorrhoids much more readily than women.

Kanellos found that there were more patients who experienced excruciating pain in the non-internal sphincterotomy group than in the internal sphincterotomy group. These differences were statistically significant.¹⁵ Amorroti evaluated the usefulness of lateral internal sphincterotomy combined with hemorrhoidectomy by the Milligan Morgans technique and his observation was that internal left lateral sphincterotomy is a safe procedure and reduces post hemorrhoidectomy pain and stenosis.¹⁶ During surgery there is less blood loss and post-operative pain is less after Ligasure hemorrhoidectomy as compared to Milligan Morgan hemorrhoidectomy.¹⁷ It was revealed in a study by Nienhuijs and Ozer that conventional hemorrhoidectomy is associated with increased postoperative pain, and described different methods of reducing postoperative pain. They postulated that LIS done simultaneously with hemorrhoidectomy is the simplest and most effective method of reducing postoperative pain.^{18,19} Similar observation was recorded in a study published in Dis Colon Rectum 2005.²⁰ Ascanelli concluded in a study that open hemorrhoidectomy was associated with higher postoperative pain scores.²¹ In a study by Sami *et al* it was observed that the routine performance of sphincterotomy through one of the hemorrhoidectomy wounds significantly reduced post hemorrhoidectomy pain and complications.²² Galizia found out in a study that addition of lateral internal sphincterotomy to hemorrhoidectomy significantly improves postoperative course and can be safely performed.²³ Diana C. *et al* observed in a study that traditional hemorrhoidectomy without LIS is associated with increased postoperative pain and delayed functional recovery.²⁴ In a study by Chauhan A. *et al* it was revealed markedly reduced postoperative pain in patients who underwent hemorrhoidectomy with LIS as compared to open hemorrhoidectomy group.²⁵

CONCLUSION

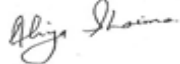

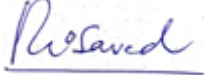

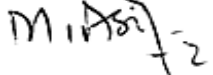
Performing hemorrhoidectomy with lateral internal sphincterotomy is a better option for treating 3rd degree, 4th degree internal hemorrhoids as well as external hemorrhoids as it remarkably relieves postoperative pain which in turn brings low morbidity, short hospital stay and early recovery.

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