

# Comparison of Postoperative Outcomes of Open Versus Closed Hemorrhoidectomy at Tertiary Care Hospital

Postoperative Outcomes of Open Versus Closed Hemorrhoidectomy

Abdul Hakeem Jamali, Mashooq Ali Khowaja, Inayat Ali Zardari, Zulfqar Ali Imtiaz Memon, Altaf Hussain Ghumro and Imtiaz Ali Soomro

## ABSTRACT

**Objective:** The objective of our study is to compare the outcome of open hemorrhoidectomy with or without lateral internal sphincterotomy with regard to postoperative complications

**Study Design:** Comparative study

**Place and Duration of Study:** This study was conducted at the Surgical Department PMCH Nawabshah from January 2018 to January 2019.

**Materials and Methods:** All the patients were admitted through surgical OPD. Digital rectal examination along with proctoscopy was done to rule out other surgical ano-rectal pathologies. All the required investigations were done and open hemorrhoidectomy was done.

**Results:** This study was conducted on 100 patients. They were divided into two groups. Group A included 50 (50%) patients and Group B included 50 (50%). Group A underwent only open hemorrhoidectomy without LIS whereas Group B underwent LIS apart from open Hemorrhoidectomy. Postoperative pain was seen in 20% of patients in Group A whereas it was only 10% in Group B. Less hospital stay and early return to work was found in Group B patients.

**Conclusion:** It is concluded that the open hemorrhoidectomy with LIS is the better option as compared to without LIS keeping in view the outcome of both procedures.

**Key Words:** Proctoscopy, Open Hemorrhoidectomy, Postoperative Pain, Ano-Rectal

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## INTRODUCTION

The word "Hemorrhoid" was first used in 1398, derived from old French "emoecoides", from Latin "haemorrhoida", from greek αιμορροϊς (Haimorrhoids), "liable to discharge blood". It is divided into two words Haima meaning blood and rhoos means "stream, flow, and current".<sup>1</sup>

Hemorrhoids are simply defined as the abnormal changes in the anal cushion. These result in the rupture of the supporting connective tissue and later on the enlargement of the vascular plexus.

Haemorrhoids are the most common disease of all anal diseases usually affecting 1 in 4 of the population. In United Kingdom, more than 20,000 patients are operated for this disease.<sup>2</sup>

Department of Surgery, PUMHSW Nawabshah.

Correspondence: Dr. Mashooq Ali Khowaja, Associate Professor, Surgical Unit-III, PUMHSW Nawabshah.  
Contact No: 0300-2446047  
Email: altafkhadim@yahoo.com

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According to Goligher classification, Hemorrhoids are classified into four grades. In Grade 1, hemorrhoids bleed but do not prolapse. In Grade 2, hemorrhoids bleed and also prolapse but reduce spontaneously. Grade 3 hemorrhoids bleed, prolapse and reduce manually. Diagnosis is done clinically.<sup>3</sup>

The treatment of haemorrhoids is divided into conservative and interventional. Conservative treatment includes change in diet and life style such increase in oral fluids, regular exercise, avoidance of straining and constipation inducing medications. The combinations of steroids, anesthetics, antiseptics and barrier creams help in relief of symptoms temporarily. In addition, venotonic therapies (Oral Flavonoid) have also enormous effects on bleeding, pruritis and discharge if any.<sup>4</sup>

Different Outpatient procedures are also performed. The most common among them is the use of Rubber Band Ligation but many studies have proved that it has recurrence rate of >30%. 4<sup>th</sup> grade present with persistent prolapse. Another OPD procedure is injection sclerotherapy. Others include infrared coagulation, bipolar, direct current and radiofrequency ablation therapy and also the combination therapy.<sup>5</sup>

Surgical therapies involve Haemorrhoidectomy. It is performed by two methods viz Open excision (Milligan-Morgan) and Closed (Ferguson). Recent

advances in open technique are diathermy, lasers and ultrasonic dissectors. Variations in Ferguson technique involve the Ligasure coagulator which is postulated to seal the tissue with minimal thermal spread with resultant reduced postoperative pain.<sup>6</sup>

All of these techniques have complications. These are pain, bleeding, urinary retention, infection, iatrogenic fissuring, stenosis and incontinence. Among all these, the dreadful complication is Postoperative pain. This is of two types viz rest pain and defecation pain. Exact cause of pain is still not determined but common theory is that it is due to spasm of Internal Anal Sphincter (IAS) because of insertion of anal pack, injury of nerve endings or the mucosal lining of the anal canal, suturing at the pedicle or below the dentate line, wound infection and the development of anal fissure.<sup>7</sup>

Lateral internal sphincterotomy is the commonly used adjunct treatment following open hemorrhoidectomy. Its supporters are of the opinion that it relieves patient from postoperative pain by abolishing spasm of the IAS.<sup>8</sup>

The rationale of study is to compare the outcomes of open hemorrhoidectomy with or without lateral internal sphincterotomy so that patients may be pain free postoperatively aimed at relieving patients from social isolation, economic burden and psychological trauma.

## MATERIALS AND METHODS

This is a comparative study of 100 patients admitted through Surgical Outpatient department (SOPD) in surgical Department of Peoples Medical College Hospital Nawabshah. This study was done from December 2017 to December 2018. PMC Hospital is a tertiary care hospital where patients are admitted not only from Sindh but also from other provinces of Pakistan. All the patients admitted had complain of bleeding per rectum, itching, something coming out of anus, painless defecation. On digital rectal examination, hemorrhoids were prolapsed and there was no any mass palpated in rectum. On proctoscopy, no any mass or polyp of rectum was found but only hemorrhoids at 3, 7, 11 o clock were found that were prolapsed but not strangulated or thrombosed. All routine investigations were done apart from cardiac opinion and anesthesia fitness. All patients were operated on elective list. Open hemorrhoidectomy was done with or without lateral internal sphincterotomy.

## RESULTS

In this study, total 100 patients were included from all surgical wards of PMCH nawabshah. They were divided into two groups. Group A included 50 (50%) patients who were operated for hemorrhoids with open hemorrhoidectomy without lateral internal sphincterotomy (LIS) and Group B included 50(50%) who underwent open hemorrhoidectomy with LIS.

In Group A, 50 patients were operated and Group B also included 50 patients. They were assessed keeping in view the postoperative ratio of complications.

Among Group A, 20 (40%) patients complained of pain during defecation postoperatively. Only 3(6%) complained of postoperative bleeding. 15 (30%) patients were catheterized on operative day due to retention of urine. 10 (20%) came on follow up with complain of stenosis. 2(4%) came with stool incontinence and 2 (4%) with anal fissure. Table 1.

Among Group B patients, 5(10%) complained of painful defecation after surgery. 4(8%) developed bleeding postoperatively that was treated accordingly. 10 (20%) patients were catheterized on operative day due to retention of urine. 2 (4%) came with stenosis postoperatively and 2 (4%) developed stool incontinence and there was no any complication of anal fissure in this group postoperatively. Table 2.

**Table No.1: Group A**

S.No	Complications	No of patients	Percentage
1	Defecation pain	20	40%
2	Bleeding	3	6%
3	Urinary retention	15	30%
4	Stenosis	10	20%
5	Incontinence	2	4%
6	Anal fissure	2	4%

**Table No.2: Group B**

S.No	Complications	No of patients	percentage
1	Defecation pain	5	10%
2	Bleeding	4	8%
3	Urinary retention	10	20%
4	Stenosis	2	4%
5	Incontinence	2	4%
6	Anal fissure	0	0%

## DISCUSSION

During screening colonoscopy, higher incidence of hemorrhoids is found up to 40% and 44.7% are symptomatic which require to undergo surgical procedures. Excisional hemorrhoidectomy is the best choice in these cases with 2% medium term recurrence and 10% long term recurrence. However, it has also demerit of postoperative pain due to different reasons. One of these is the spasm of lateral internal sphincter. Some surgeons use lateral internal sphincterotomy to decrease postoperative pain. But still this debate is controversial.<sup>9</sup>

Currently, majority are of the opinion that spasm of lateral sphincter is the cause of postoperative pain.<sup>10</sup> In our study it is also observed that patients of Group A who did not undergo LIS developed more pain as compared to Group B patients.

Lewis et al reported the incidence of fecal incontinence up to 17% in those patients who underwent LIS. Khubchand et al reported the fecal incontinence

incidence upto 22% but in our study it 4% only and it was transient later on relived with conservative therapy. Some studies have used nitroglycerine and botulinum toxin for transient relaxation of Internal Anal Sphincter (IAS) but these drugs are effective temporarily. In our study, LIS has proved to be effective for long term.<sup>11</sup>

One study showed that 14% of patients were reported to develop urinary retention and this study showed no difference for urinary retention to both type of patients who underwent LIS or not.<sup>12</sup> Same was observed in our study. Group A and Group B patients developed somewhat equal ratio of urinary retention from 30% to 40%. There was no any difference found among both groups. So it is said that effect of LIS is lacking in Urinary retention.

One international study shows the similar incidence of postoperative bleeding in all patients who were operated for LIS or not.<sup>13</sup> Same is found in our study. It was from 6% to 8% postoperatively that was treated conservatively and no any patient needed intervention.

3 studies showed the decrease in hospital stay of patients with LIS as compared to other group.<sup>14</sup> Same was found in our study. Hospital stay of Group B was minimum and they returned early to their jobs because of rapid relief from postoperative pain.

## CONCLUSION

Our study concluded that the open hemorrhoidectomy with Lateral internal Sphincterotomy is the better procedure because of decreased postoperative pain, minimum hospital stay and early mobilization of the patients.

### Author's Contribution:

Concept & Design of Study: Abdul Hakeem Jamali  
Drafting: Mashooq Ali Khowaja,  
Inayat Ali Zardari

Data Analysis: Zulfqar Ali Imtiaz  
Memon, Altaf Hussain  
Ghumro, Imtiaz Ali  
Soomro

Revisiting Critically: Abdul Hakeem Jamali,  
Mashooq Ali Khowaja,  
Inayat Ali Zardari

Final Approval of version: Abdul Hakeem Jamali

**Conflict of Interest:** The study has no conflict of interest to declare by any author.

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