A Comparative Study to Compare the incidence of Post-Operative Pain in Patients Undergoing Haemorrhoidectomy with Lateral Sphincterotomy Vs. Haemorrhoidectomy without Lateral Sphincterotomy

Avanish Kumar Saxena¹, Amrita Gupta²*, Anil Kumar³, Pulkit Agarwal⁴, Sandeep Mangla⁵

ABSTRACT

Background: Haemorrhoids are common pathology of anal canal. Over the last few years, because of new surgical techniques, increased attention has been laid on Surgical Management of hemorrhoids, still open Haemorrhoidectomy remains the mainstay of treatment. Postoperative pain is one of the most common complications of open Haemorrhoidectomy. In our study we decided to compare the incidence of postoperative pain in open Haemorrhoidectomy with or without lateral sphincterotomy.

Methods: To compare the incidence of post-operative pain in patient of open Haemorrhoidectomy with lateral sphincterotomy versus open Haemorrhoidectomy without lateral sphincterotomy.

Results: In our study group A in which open Haemorrhoidectomy along with lateral sphincterotomy was done had statistically significant less postoperative pain at 6 hours and 24 hours postoperatively and on postoperative day 7 at the time of follow up with Chi square test (P<0.0001).

Conclusion: Addition of lateral sphincterotomy decreased post-operative pain and also reduced the need for post-operative analgesia in a significant number of patients. Hence through this study, we concluded that in conventional open Haemorrhoidectomy, addition of lateral sphincterotomy is an effective, convenient, and simple way to reduce post-operative pain.

Keywords: Haemorrhoidectomy, Post-operative Pain, lateral sphincterotomy.

INTRODUCTION

Haemorrhoids are common pathology of anal canal and are defined as the downward displacement of the vascular sub mucosal cushions of anal Canal. The usual clinical course of this disease includes: rectal bleeding, prolapse, pruritis ani and if not treated may develop complications. The hemorrhoids cause pain discomfort and reduced quality of life. Over the last few years, because of new surgical techniques, increased attention has been laid on Surgical Management of hemorrhoids, still open Haemorrhoidectomy remains the mainstay of the surgical therapy for hemorrhoids.¹¹ Postoperative pain is one of the most common complications of open Haemorrhoidectomy. In our study we decided to compare the incidence of postoperative pain in open Haemorrhoidectomy with or without lateral sphincterotomy.

Aims and Objectives

To compare the incidence of post-operative pain in patient of open Haemorrhoidectomy with lateral sphincterotomy versus open Haemorrhoidectomy without lateral sphincterotomy.

METHODS

This was a prospective study conducted at S N Medical College between Dec 2015 to July 2017 after obtaining institutional ethical clearance.


Source of Support: Nil, Conflict of Interest: None
All the patients were told about the various options available for the treatment of hemorrhoids and they were freely allowed to choose the line of treatment preferred by them. 100 patients who gave the consent for open Hemorrhoidectomy are included in the study. They were between the age of 18 to 60 years with third- or fourth-degree haemorrhoids or second-degree haemorrhoids refractory to medical treatment.

EXCLUSION CRITERIA
1. Patients with medical comorbidities.
2. Patient with co-existing colorectal diseases.
3. Pregnant female.
4. Patients who had prior intervention for hemorrhoids.

Routine investigations were done before surgery. Patients were kept nil per oral 6 hour before surgery. Enema was given for preparing the bowel before surgery. The patients were randomly divided according to computer generated table into two groups.

**Group A**: patient underwent open Hemorrhoidectomy with lateral sphincterotomy (N=50)

**Group B**: patient underwent open Hemorrhoidectomy without lateral sphincterotomy (N=50)

Postoperatively, analgesics was given only if the patient had pain. *Injection ketorolac 30mg* was given. Postoperative pain evaluation was done after 6 hours, 24 hours and one week after surgery using Visual analogue scale. Figure 1. Patients were instructed to take sitz bath twice daily.

At 6hrs Table 3 show that in group A 32(64%) patients had no pain while in group B only 1(2%) patients had no pain with visual analogue score 00-01. In group A 10(20%) patients had mild pain while in group B 12(24%) patients had mild pain with visual analogue score 02. In group A 6(12%) patients had moderate pain while in group B 25(50%) patients had moderate pain with visual analogue score 03-07. In group A 2(4%) patients had severe pain while in group B 12(24%) patients had severe pain with visual analogue score 08-10.

At 24 hrs Table 3 show that in group A 35(70%) patients had no pain while in group B only 17(34%) patients had no pain with visual analogue score 00-01. In group A 3(6%) patients had mild pain while in group B 8(16%) patients had mild pain with visual analogue score 02. In group A 10(20%) patients had moderate pain while in group B 18(36%) patients had moderate pain with visual analogue score 03-07. In group A 2(4%) patients had severe pain while in group B 10(20%) patients had severe pain with visual analogue score 08-10.

At 1-week Table 3 show that in group A 47(94%) patients had no pain while in group B only 35(70%) patients had no pain with visual analogue score 00-01. In group A 3(6%) patients had mild pain while in group B 6(12%) patients had mild pain with visual analogue score 02. In group A 0(0%) patients had moderate pain while in group B 10(20%) patients had moderate pain with visual analogue score 03-07. In group A 0(0%) patients had severe pain while in group B 0(0%) patients had severe pain with visual analogue score 08-10.

**Table 1: Showing age distribution in the study**

<table>
<thead>
<tr>
<th>Age group</th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-30 yrs.</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>31-40 yrs.</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>41-50 yrs.</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>51-60 yrs.</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

**Table 2: Showing Sex Distribution**

<table>
<thead>
<tr>
<th>SEX</th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>33</td>
<td>31</td>
</tr>
<tr>
<td>Female</td>
<td>17</td>
<td>19</td>
</tr>
</tbody>
</table>

**Table 3: Incidence of Pain at 6 hrs., 24 hrs and 1 week**

<table>
<thead>
<tr>
<th>Time Duration</th>
<th>Group</th>
<th>No Pain</th>
<th>Mild Pain</th>
<th>Moderate Pain</th>
<th>Severe Pain</th>
<th>Total Patients</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>At 6 hrs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>A</td>
<td>32</td>
<td>10</td>
<td>6</td>
<td>2</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>12</td>
<td>25</td>
<td>12</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At 24 hrs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>A</td>
<td>35</td>
<td>3</td>
<td>10</td>
<td>2</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>17</td>
<td>4</td>
<td>18</td>
<td>10</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At 1 week</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>A</td>
<td>43</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>35</td>
<td>5</td>
<td>10</td>
<td>0</td>
<td>50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DISCUSSION**

Haemorrhoids are common entity in the general population and in clinical practice. Hemorrhoids are one of the oldest problems since the beginning of history.[2] Among the various complications open Hemorrhoidectomy, the most frequent one is the pain.[3,4]

**Figure 1**: Pain assessment scale.
Pain is almost a constant feature after open Haemorrhoidectomy, which makes patients defer seeking care for prolapsing, bleeding and uncomfortable piles. Eisenhammer was the first to propagate the idea that post Haemorrhoidectomy pain is due to spasm of the internal sphincter and described that its division through one of the haemorrhoids wounds is certainly an effective way to lessen postoperative pain. In a few controlled trials it has been observed that Haemorrhoidectomy combined with lateral sphincterotomy leads to decreased postoperative pain and early wound healing. Lateral Sphincterotomy decreases the spasm of internal sphincter, therefore it leads to decrease pain after anal procedures.

In our study we included 100 patients out of which 64 were male and 36 were female. There was a male dominance, with a male to female ratio of 1.7 males to 1 female. The most common age group suffering from haemorrhoids was 41-50 years, followed by 31-40 years with 41 and 32 patients respectively. Majority of people belong to 4th decade of life with a mean age of 43.

Kanellos et al. 2005, found that there were more patients who experienced excruciating pain in the non-internal sphincterotomy group. These differences were statistically significant.

A similar observation was recorded in a study published in Dis Colon Rectum 2005. Ascanelli et al. 2005, concluded in a study that open Hemorrhoidectomy was associated with higher postoperative pain scores.

Galizia et al. 2000, found out in a study that addition of lateral internal sphincterotomy to Hemorrhoidectomy significantly improved postoperative course and could be safely performed. Diana C. et al. 2009, observed in a study that traditional Hemorrhoidectomy without LIS was associated with increased post-operative pain and delayed functional recovery.

In a study by Chauhan A. et al. 2007, it was revealed markedly reduced post-operative pain in patients who underwent Hemorrhoidectomy with LIS as compared to open Hemorrhoidectomy group. [11]

**CONCLUSION**

Addition of lateral sphincterotomy decreased post-operative pain and also reduced the need for post-operative analgesia in a significant number of patients. Hence through this study, we concluded that in conventional open Hemorrhoidectomy, addition of lateral sphincterotomy is an effective, convenient, and simple way to reduce post-operative pain.

**REFERENCES**