Original Article

New Indian Journal of Surgery
Volume 8 Number 2, April - June 2017
DOI: https://dx.doi.org/10.21088/nijs.0976.4747.8217.14

A Prospective Study to Assess the Post-Operative Pain in Haemorrhoidectomy with or without Lateral Sphincterotomy

N.N. Chate*, S.G. Gireboinwad*, G.K. Kharkate, R.R. Gayke**, V.S. Dhawali**, S.Y. Dange*****

*Associate Professor, **Junior Resident III, ***Junior Resident, Department of Surgery, SRTR Medical College, Ambajogai, Dist. Beed Maharashtra, India.

Abstract

Aim: To assess the post-operative pain in patients presenting with haemorrhoids and undergo haemorrhoidectomy with or without lateral sphincterotomy. *Background*: Haemorrhoids, a common and painful condition, are the most prevalent ano-rectal disorder among adults. Haemorrhoids, and their treatment, have been a subject of consideration and discussion in the medical literature, from the beginning of documentation of human diseases. Pain after hemorrhoidectomy is universal [1].Post-operative pain following haemorrhoidectomy is a major concern now a days and its management has taken centre stage. *Material and Methods:* The present study was carried In the Department of Surgery at Swami Ramanand Teerth Medical College, Maharashtra from Nov 2013 to Nov 2015. The post-operative pain in patients with hemorrhoids &undergo either haemorrhoidectomy with lateral sphincterotomy (GROUP A) or haemorrhoidectomy without lateral sphincterotomy (GROUP B) was recorded using Visual analogue scoring (VAS).Data was compared using appropriate tests. *Results:* Total 60 patients were included in the study. (30 in each group). Maximum were above 30 years of age. Almost half were male and female in both groups. Maximum patients were belong to type III degree of haemorrhoids. The main objective was to assess the postoperative pain among patient using Visual Analogue Scale after 48hours, 1 week, 4 weeks, and after 3 months of surgery in both groups . There was no significant difference among study participants regarding frequency of pain in both groups. At the end of study 16 patients in group A and 17 patients in group B were completely pain free (p value> 0 .05). *Conclusion:* The addition of lateral sphincterotomy to open haemorrhoidectomy seems to have a positive effect on reducing the postoperative pain in a few patients though not statistical significant.

Keywords: Sphincterotomy Haemorrhoidectomy; Visual Analogue Scoring; Hemorrhoids.

Introduction

Haemorrhoids are the most prevalent ano-rectal disorder among adults, and over 90% of patients undergoing sigmoidoscopy or colonoscopy are found to have hemorrhoids of varying degrees [2,3]. Hemorrhoids are classified as internal or external based on whether they are located above or below the dentate line [2,3]. Muhammad Waqas Raza etal [4] mentioned that hemorrhoids are common entity in the general population and in clinical practice.

Pain is almost a constant feature after haemorrhoidectomy, which makes patients defer seeking care for prolapsing, bleeding, and uncomfortable piles [5].

Spasm of the internal anal sphincter plays a role in haemorrhoidal disease and may be a source of anal pain after haemorrhoid surgery [6].Different methods used for pain reduction include performing internal sphincterotomy (IS), or chemical sphincterotomy[7]. However surgical management is generally employed for grade III and grade IV haemorrhoids [8].Medical line of treatment includes addition of dietary fiber, stool softeners, increased fluid intake, and avoidance of straining [9]. Lateral internal sphincterotomy, a

Corresponding Author: S. G. Gireboinwad, Associate Professor, Department of General Surgery, SRTR Medical College, Ambajogai- 431517, District- Beed, Maharashtra, India.
E-mail: satishgire@gmail.com
Received on 31.03.2017, **Accepted on** 07.04.2017

well-known surgical treatment for anal fissures, if done simultaneously through one of the haemorrhoidectomy wounds would reduce the internal sphincter tone and postoperative pain. This study is to compare the standard procedure with a modified procedure with respect to reduction of post-operative pain.

Materials and Methods

This study was carried out at Swami Ramanand Teerth Rural Medical College and Hospital, Ambajogai, District: Beed Maharashtra.

Study Type

Prospective study.

Study Population

All diagnosed patients of second, third and fourth degree hemorrhoids refractory to medical treatment.

Study Duration

The present study was carried out from Nov. 2013 up to Nov. 2015.

Methodology

Inclusion Criteria

1. Patient diagnosed as II degree haemorrhoids refractory to medical treatment
2. III degree haemorrhoids
3. IV degree haemorrhoids
4. Patients with the above condition willing to give written informed consent

Exclusion Criteria

1. First degree and second degree hemorrhoids.
2. Patients who were found to have any concomitant perianal pathology such as perianal fissure , perianal fistula, rectal prolapse
3. Patients with medical co-morbidities.

Study Sample

Total 60 patients with Hemorrhoids needing surgery were included in the study Group A patients underwent open Haemorrhoidectomy (n=30) Group B patients open haemorrhoidectomy with Lateral internal sphinterotomy (n=30).

Before personal interview and physical examination, objective of the study was explained to participants and informed consent was taken. Intensity of postoperative pain was assessed on subsequent OPD visits by Visual analogue scoring (VAS) 0-10 at 48 hours, 1 week, 4 weeks & 3 months, 0=no pain, 1,2,3= mild pain, 4,5,6=moderate pain, 7,8,9,10=severe pain [10]. The questionnaire was carried out with predesigned proforma.. The interview technique was used as a tool for data collection.

Statistical Analysis

Data was entered in Microsoft Excel format 2000 and was analyzed by using SPSS Version 10. Data are presented as medians (quartiles, range), proportions and percentages, unless otherwise stated. Qualitative data were compared with the Chi-Square or Fisher's exact test, as appropriate. Quantitative data was compared with the unpaired "t" test *P* value less than 0.05 was considered as significant.

Postoperative analgesia was intravenous Inj Tramadol 50 mg on demand. Antibiotics were given. The patient was allowed full oral diet 6 hours after surgery& advised Sitz bath 4times daily and stool softener.

Results

Total 60 patients were included 30 in group A (Haemorrhoidectomy with lateral sphincterotomy) & 30 in group B (Haemorrhoidectomy without lateral sphincterotomy).

- Maximum, 28(93.3%) from group A & 29 (96.6%) from group B were above 30 years of age. Only 3 were below 30 year of age. The mean age was 49.38 years with a standard deviation of 4.86 years and 48.36 with a standard deviation 4.9 from Group A and Group B respectively. Age difference from both group were found to be non-significant (Table 1).
- Almost half were male and female in both groups. There were no sex difference in both group It was found to be non-significant (Table 2).
- Maximum patients were belong to type III degree of haemorrhoids In group A 19 (63.3%) and 9 (30%) were from type III and type IV degree. Similarly 17 (56.6%) and 10 (33.3%) were from type III and type IV degree of group B. There was

no difference of type degree in both group and found to non-significant (Table 3).

- The main objective of the study was to assess the postoperative pain among patient. Pain was assessed by the Visual Analogue Scale [10]. Majority of patient have no pain after 48 hrs. In group A 17 (56.6%) and group B 23 (70.6%) patients didn't have pain. Severe pain was observed in 3 (10%) in group A and 1 (3.3%) in group B patients. There was no significant difference among study participants regarding frequency of pain in both group (Graph 1).
- Frequency of pain was also assessed at 1 weeks stated that 20 (60.6%) from group A and 25 (80.3%) from group B was not having pain. Mild and moderate pain in group A was seen in 5 (13.6%) and 3 (10%) of patients from group A. From group B 3 (10%) cases of mild pain and 2 (6.6%) cases of moderate pain. One case from both group was having severe pain (Graph 2).
- After four weeks, 18 (60%) patients in Group A had no pain and 17 (56.6%) patients in group B had no pain shown in above table. Chi square test was first applied on pain frequency after 4 weeks. P value calculated was .000 which was not statistically significant (Graph 3).
- At 3 months 16 (50.3%) patients in group A and 17 (56.6%) patients in group B were completely pain free (p value> 0 .05). there was no statistically significant differences in both group (Graph 4).

Table 1: Age wise distribution of study participants

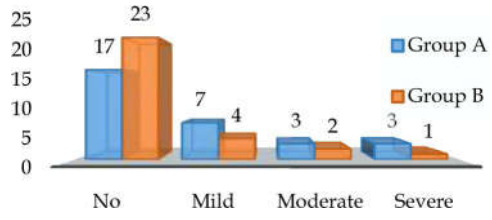
Age in years	Group A	Group B	P value
< 30	2	1	P value > 0.05
30-50	12	14	Non-significant
> 50	16	15	
Total	30	30	

Table 2: Sexwise distribution among study group

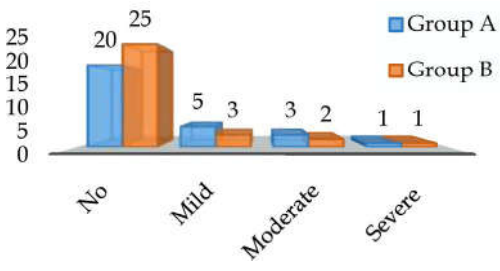
Sex	Group A	Group B	P value
Male	15	16	P value
Female	15	14	> 0.05
Total	30	30	Non-significant

Table 3: Distribution of study participants with degree of haemorrhoids

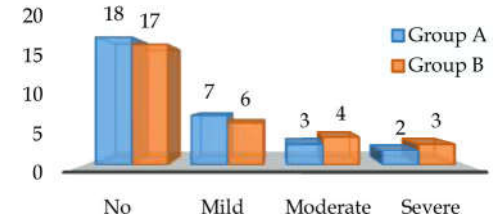
Degree of hemorrhoids	Group A	Group B	P values
II	2	3	P value
III	19	17	> 0.05
IV	9	10	Non-
Total	30	30	significant



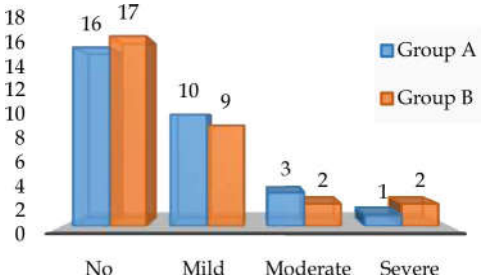
Graph 1: Frequency of pain at 48 hours among study participants



Graph 2: Frequency of pain at 1 week among study participants



Graph 3: Frequency of pain at 4 week among study participants



Graph 4: Frequency of pain at 3 month among study participants

Discussion

In present study two treatment modalities are being compared, open haemorrhoidectomy and haemorrhoidectomy with lateral internal sphincterotomy in terms of postoperative pain at 48 hours, 1 week, 4 weeks & 3 months interval. It has been observed that haemorrhoidectomy combined with lateral internal sphincterotomy leads to decreased postoperative pain and early wound healing. Eisenhammer [5] stated that post haemorrhoidectomy pain is due to spasm of the internal sphincter. Internal sphincterotomy decreases the spasm of internal sphincter therefore it leads to decreased pain after anal procedures [5].

In our study it is found that maximum patients were above 30 years of age. In other study the prevalence of hemorrhoids increases with age, with a peak in persons aged 45-65 years [4].

This study states that almost half were male and female in both groups. There were no sex differences in both groups. It was found to be non-significant. Observations made in the study of Murie et al [11] states that this ratio was 2:1, which is not comparable to our study. In one study males dominated with a ratio of 1.75 males to 1 female [4]. Maximum patients were belong to type III degree of hemorrhoids in our study similarly as in other studies [4,11].

In present study majority of patient have no pain after 48 hrs postoperatively. There was no significant difference among study participants regarding frequency of pain in both groups.

Muhammad Waqas Raza etal [4] also has concluded that lateral internal sphinterotomy, combined with haemorrhoidectomy, is associated with less postoperative pain. In our study, after one week and even after 4 weeks, maximum participants had no pain. At the end of study 16 (50.3%) patients in group A and 17 (56.6%) patients in group B were completely pain free (p value> 0 .05). There was no statistically significant differences in both group. Kanellos et al [12] also found that there were more patients who experienced excruciating pain in the non-internal sphincterotomy group than in the internal sphincterotomy group. It was revealed in a study by Nienhuijs and Ozer that LIS done simultaneously with haemorrhoidectomy is the simplest and most effective method of reducing postoperative pain [4].

However Khubchandani et al [1] and similar study by Mathai etal [13] concluded that lateral internal sphincterotomy does not reduce postoperative pain and may have the effect of causing impairment of continence. In our study, however LIS seems to be helpful.

However in a study by Chauhan A. et al [7] and Amorroti et al [14] revealed markedly reduced postoperative pain in patients who underwent haemorrhoidectomy with LIS as compared to open haemorrhoidectomy group.Other studies by Galizia et al [15] and Asfar et al [16] also reported that addition of lateral internal sphincterotomy to haemorrhoidectomy significantly improves postoperative course and can be safely performed.

Our study demonstrated that pain relief was better in patients subjected to internal sphincterotomy. We must also recognize the facts that lateral internal sphincterotomy would be a uniform technique across patients. It is clearly evident that the addition of internal anal sphincterotomy to hemorrhoidectomy played an instrumental role in easing the postoperative morbidity dramatically, especially so with regard to post-operative pain. This study may be criticized as it relies on reporting of VAS scores by the patient. It is accepted that VAS attempts to equate subjective feedback with objective data and is thus subject to valid criticism.

Conclusion

The addition of lateral internal sphincterotomy to open hemorrhoidectomy seems to have a positive effect on reducing the postoperative pain in a few patients though not statistical significant.

References

1. Khubchandani IT. Internal Sphincterotomy With Hemorrhoidectomy Does Not Relieve Pain. Dis Colon {&} Rectum [Internet]. 2002; 45(11):1452–7. Available from: http://dx.doi.org/10.1007/s10350-004-6450-3.
2. Su M-Y, Chiu C-T, Lin W-P, Hsu C-M, Chen P-C. Long-term outcome and efficacy of endoscopic hemorrhoid ligation for symptomatic internal hemorrhoids. World J Gastroenterol. 2011; 17(19): 2431–6.
3. Pfenninger JL, Surrell J. Nonsurgical treatment options for internal hemorrhoids. Am Fam Physician. 1995; 52(3):821–34.
4. Raza M, Khan A, Kamran R, Waqas K, Yusuf A. Hemorrhoidectomy with and without lateral internal sphinterotomy. J Rawalpindi Med Coll. 2013; 17(2):189–91.

5. Eisenhammer S. Internal anal sphincterotomy plus free dilatation versus anal stretch with special criticism of the anal stretch procedure for hemorrhoids: The recommended modern approach to hemorrhoid treatment. Dis Colon Rectum. 1974; 17(4):493–522.
6. Amoli HA, Notash AY, Shahandashti FJ, Kenari AY, Ashraf H. A randomized, prospective, double-blind, placebo-controlled trial of the effect of topical diltiazem on posthaemorrhoidectomy pain. Color Dis. 2011 Mar; 13(3):328–32.
7. Chauhan A, Thomas S, Bishnoi PK, Hadke NS. Randomized controlled trial to assess the role of raised anal pressures in the pathogenesis of symptomatic early hemorrhoids. Dig Surg. 2007; 24(1):28–32.
8. Haas PA, Haas GP, Schmaltz S, Fox TA. The prevalence of hemorrhoids. Dis Colon Rectum. 1983; 26(7): 435–9.
9. Moesgaard F, Nielsen L, Hansen JB, Knudsen JT. High-fiber diet reduces bleeding and pain in patients with hemorrhoids. Dis Colon Rectum. 1982; 25(5): 454–6.
10. Kahl C, Cleland JA. Visual analogue scale, numeric pain rating scale and the McGill Pain Questionnaire: an overview of psychometric properties. Phys Ther Rev. 2005; 10(2):123–8.
11. Murie JA, Sim AJW, Mackenzie I. The importance of pain, pruritus and soiling as symptoms of haemorrhoids and their response to haemorrhoidectomy or rubber band ligation. Br J Surg. 1981; 68(4):247–9.
12. Kanellos I, Zacharakis E, Christoforidis E, Angelopoulos S, Kanellos D, Pramateftakis MG, et al. Usefulness of lateral internal sphincterotomy in reducing postoperative pain after open hemorrhoidectomy. World J Surg. 2005; 29(4):464–8.
13. Mathai V, Ong BC, Ho YH. Randomized controlled trial of lateral internal sphincterotomy with haemorrhoidectomy. Br J Surg. 1996; 83(3):380–2.
14. Amorotti C, Mosca D, Trenti C, Pintaudi U. Usefulness of lateral internal sphincterotomy combined with hemorrhoidectomy by the Milligan-Morgan's technique: results of a prospective randomized trial. Chir Ital. 2002; 55(6):879–86.
15. Galizia G, Lieto E, Castellano P, Pelosio L, Imperatore V, Pignatelli C. Lateral internal sphincterotomy together with haemorrhoidectomy for treatment of haemorrhoids: a randomised prospective study. Eur J Surg. 2000; 166(3):223–8.
16. Asfar SK, Juma TH, Ala-Edeen T. Hemorrhoidectomy and sphincterotomy. Dis Colon Rectum. 1988; 31(3):181–5.