



A Comparison of Open Hemorrhoidectomy versus Open Hemorrhoidectomy with Internal Sphincterotomy in Rural Indian Population

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Citation of this Article: Dr. Sairam Peddireddy, Dr. Pusuluri Sai Vaibhav Kumar, Dr. Purna Chandra Rao Paritala, Dr. Kanna Chandra Varma, Dr. Ashok Reddy, “A Comparison of Open Hemorrhoidectomy versus Open Hemorrhoidectomy with Internal Sphincterotomy in Rural Indian Population,” IJMSAR – January – 2023, Vol. – 6, Issue - 1, Page No. 11-16.

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Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Introduction

Haemorrhoids are dilated anal cushions occupying 3, 7, and 11 ‘O’clock positions. They are more common in cases of raised intra-abdominal pressure in cases of obesity, constipation, and pregnancy. The most common presentation is bleeding per rectum; other manifestations include mass descending per rectum, Pain, mucous discharge, and pruritis. The surgery is done in grade 3 and grade 4 haemorrhoids and grade 2 not responding to treatment. There are various techniques of surgery employed for haemorrhoids. These include Milligan & Morgan's open approach, stapler hemorrhoidectomy, Ferguson closed process,

hemorrhoidectomy using a harmonic scalpel, ligasure, and Doppler-guided hemorrhoidal artery ligation. Even though various techniques are employed, the most commonly used treatment is Milligan & Morgan open technique. The complications following haemorrhoid surgery include early complications such as Pain, primary haemorrhage, retention of urine. The most common complication is Pain after surgery. Various theories have been proposed for the cause of post-op pain. But the most commonly accepted is increased tone due to spasms of the internal sphincter. Even though non-invasive techniques have been

employed, such as topical nitroglycerine, calcium channel blockers, Lords dilatation, each has its demerits, such as topical application resulting in severe headache and two increased tissue thickness. Lord's dilatation resulted in anal incontinence. Various studies have been conducted on the decrease in post-op pain via lateral internal sphincterotomy. This study concluded that using lateral internal sphincterotomy resulted in a relaxation of the sphincter, decreased post-op pain, early wound healing, and early recovery. Here in this study, we have analyzed the post-op pain following Milligan& Morgan Technique vs Milligan & Morgan technique with lateral internal sphincterotomy in 50 cases

Aim and Objectives

- Primary outcome: to study Pain in the postoperative period of Haemorrhoidectomy
- Secondary outcome: to explore Intraoperative complications & Postoperative complications following Haemorrhoidectomy

Materials and Methods

- **Study design:** Prospective comparative study
- **Study sample:** 50 cases
- **Duration of study:** 12 months
- **Source of sample:** patients admitted in the surgical ward of all units of GREAT EASTERN MEDICAL SCHOOL & HOSPITAL who undergo open hemorrhoidectomy

Inclusion Criteria

Patients with clinical and investigatory support for the diagnosis and willingness for the surgical management of haemorrhoids grade 3 and grade 4.

Exclusion Criteria

1. Inflammatory bowel disease
2. Fissure
3. Recurrent haemorrhoids

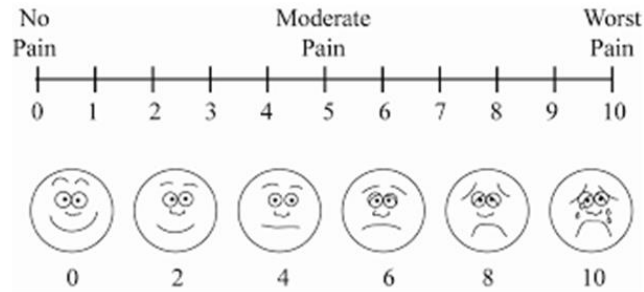
4. Fistula
5. Malignancy.
6. Cirrhosis and portal hypertension
7. Pregnancy
8. Age 60 years

Results

The parameters to be compared are tabulated. The data are expressed in the form of means and percentages. Data are tested using statistical tests of significance. From the mean value, the standard deviation (SD) found, and the standard error (SE) of the difference between the two means were found. S. E of difference between two means. $\sqrt{(sd1)^2/n1 + (sd2)^2/n2}$ Sd1 standard deviation of first group. Sd2 standard deviation of the second group. n1 total number in the first group. n two total numbers in the second group. For values expressed as percentages and proportions, the standard error of the difference between two proportions was used. If The Actual Difference Between Two Means Is Greater Than Twice Se Between Those Two Means, The Difference Is Said To Be Significant

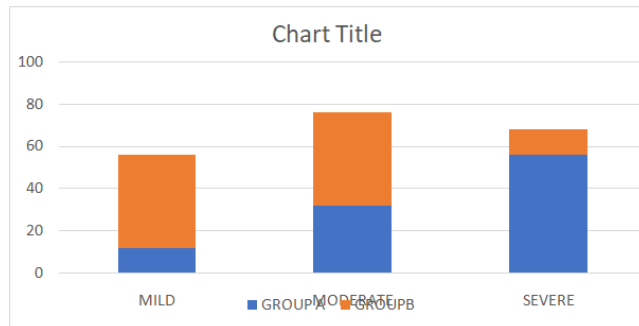
Standard Error of difference between two proportions. $\sqrt{p1q1/n1 + p2q2/n2}$ p .proportion n number IF ACTUAL DIFFERENCE BETWEEN TWO PROPORTIONS IS GREATER THAN TWICE SE BETWEEN THOSE TWO PROPORTIONS, THE DIFFERENCE IS SAID TO BE SIGNIFICANT. This prospective study comprised 50 cases of haemorrhoids which were randomly divided into two groups of 25, each named Group A and Group B. Open hemorrhoidectomy was done in group A and lateral internal sphincterotomy in Group B. All the parameters were recorded intra and postoperatively in both groups. The randomization was done by lottery method

	GROUP A	GROUP B
MALE	07	21
FEMALE	18	4



After 12 Hours

	GROUP A	GROUP B
MILD	12%	44%
MODERATE	32%	44%
SEVERE	56%	12%



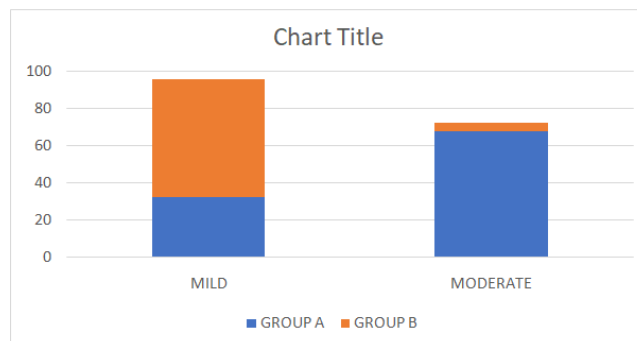
After 24 Hours

	GROUP A	GROUP B
MILD	12	44
MODERATE	44	44
SEVERE	44	12



After 48 Hours

	GROUP A	GROUP B
MILD	32	64
MODERATE	68	36



- Postoperative Pain was assessed periodically at 12, 24, and 48 hrs after surgery, and the p values obtained were 0.002,0.01, 0.024, respectively
- p-value < 0.005 Implying That Y here Is Statistical Difference Between Two Groups

Discussion

Haemorrhoids are one of the most common disorders of the anus. Various treatment modalities have been described over the periods, including conservative management for grade 1 and grade 2 haemorrhoids, surgical management like open hemorrhoidectomy (

MILLIGAN & MORGAN), closed hemorrhoidectomy procedures like Park’s method, Ferguson’s method, stapled hemorrhoidopexy, Doppler-guided haemorrhoid artery ligation. However, open hemorrhoidectomy, mainly for grade 3 and 4 haemorrhoids, is still widely used and is considered the standard gold technique for the treatment of haemorrhoids. The most commonly encountered complications of hemorrhoidectomy surgery are Pain in the postoperative period, urinary retention, and bleeding in the postoperative period.

Various studies have been performed to reduce Pain in the postoperative period following open hemorrhoidectomy. Of all the studies, many studies concluded the fact that lateral internal sphincterotomy, in addition to open hemorrhoidectomy, has proven to reduce the Pain postoperative period following hemorrhoidectomy since the cause of Pain had been attributed to spasm of the internal sphincter muscle, which is the most commonly accepted hypothesis for Pain in the postoperative period following open hemorrhoidectomy technique

In this study, the aim was to study the effectiveness of internal sphincterotomy in pain management after open hemorrhoidectomy. The study group- consists of a total of 50 patients with fissures and Crohn's disease excluded. The patient was selected randomly based on the inclusion criteria and exclusion criteria. The selected 50 patients were then reallocated into two groups, group A and group B. Group A with a total of 25 patients, underwent only Milligan & Morgan open hemorrhoidectomy and Group B, with a total of 25 patients, underwent both Milligan & Morgan open hemorrhoidectomy and lateral internal sphincterotomy. The pre-operative preparation of the patient for general condition stabilization was done. Those patients with diabetes and hypertension were treated appropriately with anti-hypertensive drugs and insulin therapy. Blood transfusions were given to patients with low haemoglobin. The patient was given an enema on the night before surgery and also in the early morning of surgery. The procedure was done according to the group the patient had been allotted. All the patients were given opioid analgesics on the night of surgery. Various parameters have been taken into account and studied. Their values in terms of percentage, mean, and standard deviation have been

arrived at and tabulated. From the values, the test of statistical significance was calculated, and inferences were obtained. The regular follow-up of the patient was done seven days after 75 surgery, one month after surgery, and three months after surgery, looking for complications

The Pain in the postoperative period was assessed in terms of a visual analogue scale in the first 12 hours after surgery and 24 hours after surgery, and 48 hours after surgery. In the study, the number of patients experiencing the Pain was listed in terms of percentage, was tabulated, and the statistical significance was tested. The p-value came out to be 0.01 in the first 24 hours and 0.02 in the first 48 hours, indicating that there is a difference in Pain in the people of Group A and Group B. Further, the use of analgesia was taken into account with the on-demand protocol followed throughout the study. The use of analgesics was taken into account by the number of tablets used for the 48 hours time interval, and the findings were tabulated in terms of percentage. These were again subjected to the test of statistical significance. The p-value came out to be 0.02, which again implied the fact that there was a statistical difference between the Group A and Group B people in terms of analgesia usage. Internal sphincterotomy with Milligan & Morgan seemed to have a better outcome in terms of Pain in the postoperative period and also in terms of the use of analgesia in the postoperative period. Also in these, the patients were also observed for various complications of hemorrhoidectomy. These 76 included urinary retention, bleeding, bowel incontinence, return to work, duration of hospital stay

In the case of urinary retention, the findings were taken by the number of people requiring

catheterization in the postoperative period, and a test for significance was taken. The p-value came out as 0.01, implying that Group B people had a lesser incidence of urinary retention than Group A people. Lateral internal sphincterotomy with Milligan & Morgan technique was found to be superior to Milligan & Morgan alone in terms of Pain and postoperative urinary retention. Bleeding was again observed, and the findings were tabulated. The p-value was 0.07, indicating that there was no significant difference in terms of bleeding. The duration of stay in the hospital and average day of return to work was observed, and the mean for an average stay in the hospital was 7.56 in Group A and 5.60 in Group B, and the p-value was 0.00, implying the presence of a difference between the two. The mean of return to work after surgery was 20.16 in Group A and 14.8 in Group B, with a p-value of 0.00, indicating the statistical difference between the two procedures.

Conclusion

Since Milligan & Morgan open hemorrhoidectomy still remains as gold standard procedure in most developing countries, the addition of lateral internal sphincterotomy to the Milligan & Morgan available technique has been shown to decrease the severity of Pain in the postoperative period and also improve the quality of life of the patient

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