

OUTCOME OF SURGICAL HAEMORRHOIDECTOMY BY OPEN AND CLOSED TECHNIQUES

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ABSTRACT

Objectives: To compare the outcome of surgical haemorrhoidectomy by open and closed techniques in terms of "Post operative pain" and "Early stricture formation".

Study Design: Randomized Controlled Trial (RCT).

Place and Duration of Study: Department of Surgery, Combined Military Hospital Rawalpindi from January 2007 to November 2007.

Patients and Methods: A total of 100 patients were included in the study which was categorized into two equal study groups. Group A underwent open haemorrhoidectomy and Group B underwent closed haemorrhoidectomy under spinal anaesthesia. Postoperative pain was ascertained at 6, 12 and 24 hours after operation by visual analogue scale. Early stricture formation was assessed by per rectal examination three weeks after haemorrhoidectomy.

Results: The mean post operative pain severity score according to linear analogue scale was 4.20 (SD = 0.782) and 4.94 (SD = 1.420) after six hours, 3.26 (SD = 0.803) and 3.90 (SD = 1.147) after twelve hours and 2.20 (SD = 0.782) and 2.98 (SD = 0.937) after twenty four hours in Group A and B respectively. At all the three time intervals, the differences in means of post operative pain severity were statistically significant with P-value < 0.05. The frequency of early stricture formation in group A was 6 % while in group B was 4 % and this difference was statistically insignificant (P-value = 0.646).

Conclusion: The study concludes that the post operative pain in cases of open haemorrhoidectomy is less than that in closed procedure and there is no significant difference in stricture formation between the two procedures.

Keywords: Haemorrhoidectomy, postoperative pain, stricture formation.

INTRODUCTION

Haemorrhoids are a health problem that has affected humans since prehistoric times. The word haemorrhoid is derived from two Greek words, haima meaning blood and rhoos meaning flowing¹. Haemorrhoids are a common problem faced by the present day surgeon. The magnitude of problem is tremendous. In United States the prevalence is greater than 4%². In Pakistan, exact statistics about its prevalence are not known. However, in view of the large number of cases undergoing routine haemorrhoidectomy, it is regarded as a very common problem comprising a major proportion of general surgical work load. Majority of the patients in our part of the world seek medical advice very late due the socioeconomic and cultural

restraints as compared to the western world. That is why, many patients who present in the outdoor patient department harbour advanced degrees of haemorrhoids after either exhausting their resources in the hands of the quacks or being reluctant to seek consultation for their disease in the initial stages due to cultural inhibitions. The only treatment option in such cases is haemorrhoidectomy. The complications associated with haemorrhoidectomy have due importance in regards to post operative morbidity including hospital stay and return to work. The most common complications associated with surgical haemorrhoidectomy are post-operative pain, bleeding and stricture formation.¹ The common surgical treatment options used are open (Milligan Morgan) and closed (Ferguson) techniques^{1,3,4}. Numerous studies conducted in Pakistan and abroad claim the advantage of one method over the other, with very little to choose between them^{5,6}. This study addresses the issue as regards our own setup in Armed Forces.

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PATIENTS AND METHODS

This (RCT) study was conducted in the Department of Surgery, Combined Military Hospital Rawalpindi from January 2007 to November 2007. A total of 100 patients were included in the study. Selection criteria were male patients with third degree haemorrhoids in different age groups who had not undergone previous perianal surgery. The patients with infected or recurrent haemorrhoids, bleeding disorders and any ailment which delayed wound healing such as Diabetes mellitus, uraemia and jaundice were excluded. Written informed consent was taken from the patients. A detailed history and relevant physical examination was carried out. Patients were randomly divided into two study groups using random tables. Group A underwent open haemorrhoidectomy and group B underwent closed haemorrhoidectomy. Both techniques involved ligation of pedicle and excision of haemorrhoid but in the open technique the anal mucosa and skin were left open to heal by secondary intention giving a clover leaf appearance, and in the closed procedure, the wound was sutured. Postoperative pain was ascertained at 6, 12 and 24 hours after operation by visual analogue scale. Early stricture formation was assessed by per rectal examination three weeks after haemorrhoidectomy and the need for dilation afterwards.

Data Analysis: Statistical packages for social sciences (SPSS) were used to analyze data. Relevant descriptive statistics; frequency and percentage were computed for qualitative variables like stricture formation. Measure of central tendency and dispersion like mean and standard deviation were estimated for quantitative variables such as age and pain. The difference between these was compared for significance using "t" test for numeric variables and Pearson Chi-Square test for categorical variables. P value less than 0.05 was considered significant.

RESULTS

Total 100 patients were studied. All were male. Age range was 16 to 98 years with mean age 49 years. Fifty patients underwent open

haemorrhoidectomy (Group A) and 50 patients underwent closed haemorrhoidectomy (Group B).

In Group A, the mean post operative pain severity score was 4.20 (SD= 0.782) out of a total score of 10 of the visual analogue scale six hours after the surgery, where as it was 4.94 (SD= 1.420) in Group B. The difference in means of both groups was found to be statistically significant as the P-value < 0.002. After twelve hours of surgery, the mean post operative pain severity score was 3.26 (SD= 0.803) in Group A and 3.90 (SD = 1.147) in Group B. The difference of means was also statistically significant with a P-value<0.003. Similarly, after twenty four hours of surgery, the mean post operative pain severity score in Group A was 2.20 (SD = 0.782) whereas, it was 2.98 (SD=0.937) in Group B with a P-value <0.001 showing this difference to be significant.

As regards early post operative stricture formation with a need for dilatation three weeks after surgery, three (6 %) patients needed anal dilatation in group A and two (4 %) patients in group B. P-value was found to be <0.646 rendering this difference to be statistically insignificant.

DISCUSSION

Haemorrhoidectomy is one of the commonest general surgical problems^{1,2}. Both open and closed surgical methods of operation are practised all over the world and the choice is mainly of the surgeons themselves. However, the superiority of one over the other had been a debate.

A study conducted at St. Mark's Hospital concluded that although the healing time is longer, the open technique is more advantageous with respect to shorter operating time, less discomfort in early post operative period and lower morbidity rate⁷. Another study at Mayo Hospital Lahore showed similar observation that the pain and analgesic requirement on the day of surgery and the first post operative day was significantly lower in open haemorrhoidectomy group⁸. The results obtained in this study revealed statistically significant difference in the severity of post

operative pain between the two groups. Post operative pain was less in the patients who underwent open haemorrhoidectomy as compared to those who were subjected to closed procedure. However, there are conflicting studies that have increased the controversy of a better procedure between open and closed haemorrhoidectomies. A prospective, randomized, clinical trial at Hang Clinic Gangnam in Korea considered closed technique to be more advantageous with respect to less pain during the early postoperative period and faster wound healing⁹. Similar conclusions were drawn by the University Hospital of Elche, Spain that closed haemorrhoidectomy gives better results in terms of pain and healing than open haemorrhoidectomy, whereas recurrence and complications are similar after 1 year¹⁰. Studies conducted in Pakistan also showed conflicting result. A study done previously at CMH Rawalpindi showed that the severity of the postoperative pain was much less (mean pain score 2.5) in closed technique as compared to open haemorrhoidectomy (mean pain score 4.01)¹¹. Although, different studies have conflicting results but in our study it has been found that open haemorrhoidectomy is better than closed technique in regards to post operative pain.

The study which conflicted in results regarding post operative stricture formation was conducted at Jinnah Hospital, Lahore, according to which the incidence of anal stenosis was less in closed as compared to open haemorrhoidectomy¹². In our study, the difference in early stricture formation turned out to be statistically insignificant.

Open haemorrhoidectomy is the operation of choice for third degree haemorrhoids in our

setup keeping in view the available resources and widespread practice of this procedure. Moreover, open technique requires less technical expertise as compared to the closed procedure making it a more appropriate treatment modality for the young surgeons.

CONCLUSION

This study shows that the post operative pain in cases of open haemorrhoidectomy is much less as compared to the closed procedure. There is no significant difference in stricture formation between the two procedures.

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