



COMPARISON BETWEEN CLOSE AND OPEN HAEMORRHOIDECTOMY TECHNIQUES FOR THEIR OUTCOMES

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ABSTRACT

Objective: To compare the surgical outcomes in cases managed by closed vs open haemorrhoidectomy techniques. **Methodology;** This randomized control trial done at Department of Surgery, Lahore General Hospital. Lahore during April 2017 to September 2017. The cases of age more than 18 years irrespective of their gender having haemorrhoids with grade III & IV lasting for at least 1-month duration were included. Then all these cases were divided into two groups and the cases in Group A were treated with closed and those in group B with open technique. These cases were then followed for different surgical outcomes. **Results;** In this study, 50 cases were selected in each group. The mean ages in group A and B were 48.71 ± 12.89 years vs 45.56 ± 11.45 vs 48.34 ± 11.79 ($p = 0.87$) and mean duration of haemorrhoids was 5.57 ± 1.45 vs 4.78 ± 1.03 months. Post surgical outcome comparison in both group revealed wound infection in 2 (4%) vs 18 (36%), post operative bleeding in 4 (8%) vs 11 (22%) and pain in 18 (36%) vs 7 (14%) with p values of 0.0001, 0.01 and 0.01 respectively. **Conclusion;** Open haemorrhoidectomy is significantly better than closed technique regarding post operative bleeding and pain while latter is significantly better in terms of wound infection.

KEYWORDS: Haemorrhoids, Open technique, Close technique.

INTRODUCTION

Haemorrhoids are common and are considered amongst the most commonly presenting entity to the surgical out patients, emergencies and clinics. They can broadly be classified into two major sub types i.e. external and internal. The incidence of these is around 50% across the globe after the age of 50 years and highest number is seen in the developed countries like United States and Europe revealing an underlying westernisation life style and their number is also increasing in the under developed countries; though data is lacking.^[1-2]

The major underlying clinical conditions include chronic constipation and urinary retention. The diagnosis is usually made clinically and there are different grading systems to label its severity and is usually divided into grade I to grade IV where former may not need any surgical intervention and the later may strangulate or bleed to some extent warranting an urgent surgical intervention. Surgical intervention in the form of resection is the most commonly deployed entity and can be done by open or close techniques each carrying their own benefits and surgical complications. The major complications include post operative bleeding, wound site infection and pain. There is always controversy

regarding the best modality with minimum side effect profile.^[3-5]

MATERIAL AND METHODS

Objective

To compare the surgical outcomes in cases managed by closed vs open haemorrhoidectomy techniques.

Study settings

Randomized control trial

Study site

Surgical Departments, Lahore General Hospital, Lahore.

Study time

April 2017 to September 2017

Sampling technique

Non probability-consecutive sampling

The cases of age more than 18 years irrespective of their gender having haemorrhoids were selected. The haemorrhoids were labelled on clinical digital rectal examination and were divided into grade I- IV on the basis of severity, however the cases with grade III & IV lasting for at least 1-month duration were included. Then

all these cases were divided into two groups by simple random numbering. The cases in Group A were treated with closed and those in group B with open technique. In closed technique the haemorrhoid bundle was excised and after that wound was closed completely and in contrast to this in open technique, after excision, wound was left open. These cases were then followed and observed for complete wound healing, pain score on visual analogue scale (labelled significant if score more than 4) and post-operative bleed (significant if > 50 ml in 24 hours).

Statistical analysis

The data was analyzed with the help of SPSS version 23.0. Both the groups will be compared and post

stratification Chi-Square test was applied taking P-value ≤ 0.05 as significant.

RESULTS

In this study, 50 cases were selected in each group. The mean ages in group A and B were 48.71 ± 12.89 years 45.56 ± 11.45 vs 48.34 ± 11.79 ($p = 0.87$) and mean duration of haemorrhoids was 5.57 ± 1.45 vs 4.78 ± 1.03 months as shown in table I. Post surgical outcome comparison in both group revealed wound infection in 2 (4%) vs 18 (36%), post operative bleeding in 4 (8%) vs 11 (22%) and pain in 18 (36%) vs 7 (14%) with p values of 0.0001, 0.01 and 0.01 respectively as in table II.

Table I: Demographics.

| | Group-A | Group-B | p value |
|-----------------------------------|-------------------|-------------------|---------|
| Age (years) | 45.56 ± 11.45 | 48.34 ± 11.79 | 0.87 |
| BMI (kg/m^2) | 28.78 ± 3.56 | 27.44 ± 2.98 | 0.78 |
| Duration of haemorrhoids (months) | 5.57 ± 1.45 | 4.78 ± 1.03 | 0.71 |
| No. of cases in Grade III | 29 (58%) | 32 (64%) | 0.89 |
| No. of cases in Grade IV | 21 (42%) | 18 (36%) | 0.89 |

Table II: Outcome.

| | Group-A (n=50) | Group-B (n=50) | p value |
|-------------------------|----------------|----------------|---------|
| Wound infection | 2 (4%) | 18 (36%) | 0.0001 |
| Post operative Bleeding | 4 (8%) | 11 (22%) | 0.01 |
| Pain | 18 (36%) | 7 (14%) | 0.01 |

DISCUSSION

Haemorrhoids are not uncommon and their number is on the rise day by day especially in the third world countries due to change in life style and more of a westernization trend; where the number is already high and are seen in half of the cases with age more than 50 years of life. Grade II and more usually need surgical intervention and open and closed techniques are under extensive discussion regarding their minimal surgical complication.

In this study the wound infection was the least common entity seen in close technique where it was noted in 2 (4%) of the cases only vs open group affecting 18 (36%) cases with significantly high p value of 0.0001. This finding of the present study was in line with the results of the previous studies and Rehman et al, in their study revealed that wound healing was seen in all 100% of cases and none of the case was infected in closed techniques whole in open technique healing was observed in 66 (50.76%) of cases. In another study by Ho et al also found close technique as better than open one and time for healing was also better and was observed as 4.9 weeks vs 6.9 weeks in open group.^[7]

The cases with significant pain was observed more in cases with close technique affecting 18 (36%) vs 7 (14%) of cases in open technique. With $p = 0.01$. This was also

similar to the randomized control trial done by Rehman et al where this sort of mild pain was seen in 40 cases and moderate in 78 cases in open as compared to mild and moderate pain in 30 and 87 in closed surgical haemorrhoidectomy ($p = 0.01$).^[6] Gencosmanoglu et al, revealed the opposite of findings as compared to above mentioned study but the statistical difference was non significant with p value more than 0.05.^[8] Carapeti et al also found significantly high difference in these groups and the closed technique was seen as better modality.

In this study, post-operative bleeding was noted in 4 (8%) vs 11 (22%) in close vs open technique with significant difference of 0.02. These findings were also supported by the studies in the past where in a study this was observed in 44 (33.84%) of cases in open and 14 (13.84%) \ in closed group.^[6,10]

CONCLUSION

Open haemorrhoidectomy is significantly better than closed technique regarding post operative bleeding and pain while latter is significantly better in terms of wound infection.

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