

# Comparison of Open Vs Closed Haemorrhoidectomy in the Management of Haemorrhoids

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## ABSTRACT

**Background:** Haemorrhoidectomy is the treatment of choice for 3<sup>rd</sup> and 4<sup>th</sup> degree haemorrhoids. Open haemorrhoidectomy is the conventional methods of haemorrhoidectomy. Closed haemorrhoidectomy has been advocated in certain centres.

**Aim:** To compare the two methods of haemorrhoidectomy, closed and open types, considering operating time, hospital stay, healing, post operative complications and analgesic requirements in the management of hemorrhoids.

**Study design:** This was a Quasi experimental study.

**Setting:** Surgical Unit-I, Sir Ganga Ram Hospital, Lahore.

**Study period:** One year (from 17/03/2005 to 16/03/2006).

**Sampling size:** The study included 100 patients of 3<sup>rd</sup> and 4<sup>th</sup> degree haemorrhoids.

**Methods:** One hundred age and sex matched patients suffering from 3<sup>rd</sup> and 4<sup>th</sup> degree haemorrhoids were studied. They were randomly divided into two groups; group 1 and group 2. Group 1 underwent open haemorrhoidectomy. Group 2 underwent closed haemorrhoidectomy. They were followed up post operatively in the ward and on outdoor basis. Operating time, hospital stay, healing, post operative complications and analgesic requirements noted with each technique and compared.

**Results:** The mean age at presentation was 39.45±13.50. Fifty six (56%) patients were females and 46 (46%) were males. Closed technique took more operating time (mean operating time 28.40±3.00 min.) than open technique (mean operating time 31.50±2.20min.). Healing was rapid in closed haemorrhoidectomy. Both techniques were associated with mild degree of pain post operatively. There was no other statistical difference in both techniques.

**Conclusion:** Closed technique resulted in rapid wound healing but took more operating time. Statistically insignificant difference in hospital stay, post operative pain and complications between two techniques was found. Both techniques were equally effective in the management of haemorrhoids.

**Keywords:** Haemorrhoids. Closed Haemorrhoidectomy. Open Haemorrhoidectomy.

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## INTRODUCTION

Haemorrhoidectomy is currently the "gold standard" treatment for 3<sup>rd</sup> and 4<sup>th</sup> degree hemorrhoids. Two well-established methods are open Milligan Morgan excision and the closed Ferguson's technique.<sup>1</sup> There is another type of haemorrhoidectomy recently developed stapled haemorrhoidectomy. Several randomized studies<sup>2-7</sup> have been performed to achieve a procedure with less; pain, complications and analgesic requirement for haemorrhoids treatment. Controversy is still there which haemorrhoidectomy; open or closed, is the surgical treatment of choice for haemorrhoidal pathology. There is dearth of research regarding management of haemorrhoids. Keeping in view, the above mentioned factors and to determine the appropriate technique in our conditions, a prospective study was planned in patients with 3<sup>rd</sup> and 4<sup>th</sup> degree haemorrhoids.

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## MATERIALS AND METHODS

The study was conducted in the Department of Surgery, Sir Ganga Ram Hospital Lahore from 17/03/2005 to 16/03/06). One hundred patients of hemorrhoids were included with 50 in each group. Non-probability sampling technique was applied. Patients with haemorrhoids having 3<sup>rd</sup> and 4<sup>th</sup> degrees presenting in outpatient departments of surgical unit-I who gave informed consent were included. Exclusion criteria was patients with TB, IHD, malignancy, 1<sup>st</sup> degree hemorrhoids and patients previously treated by haemorrhoidectomy. It was a Quasi experimental study in which comparison between two techniques of haemorrhoidectomy is done.

All patients were subjected to thorough clinical examination and routine investigations. Clinical examination included general examination for any co morbid condition, digital rectal examination and proctoscopic examination. Routine investigations included hemoglobin, complete blood examination and X-ray chest to rule out associated other co

morbid conditions. Both techniques were done under spinal anaesthesia.

The data of patient including age, sex and degrees of haemorrhoids recorded. Each patient in the study was randomly divided into two groups; group 1 and group 2. Informed consent for each procedure taken. In group 1, all patients underwent open haemorrhoidectomy; in group 2, all patients underwent closed haemorrhoidectomy. Spinal anaesthesia was used for each technique. The operative technique, operating time, hospital stay, wound healing, complications associated with each group like pain, hemorrhage, stenosis, fissure and recurrence and analgesic requirements all recorded. The patients were followed up in the ward and on O.P.D basis upto 7<sup>th</sup> week. A proforma which included the all above mentioned detail was filled for each patient included in the study.

**Data analysis:** The recorded data of both groups entered in SPSS 20 version. Quantitative (age, operating time and hospital stay) and qualitative (sex, site, degrees, pain score and complications) variables were identified. Mean and standard deviation were applied for quantitative variables. Percentage and frequency were applied for qualitative variables. Results obtained with two techniques were compared. p value sought. p value of 0.05 was considered as cut off level. For qualitative variables chi square and for quantitative variables 't' test were applied as tests of significance.

**RESULTS**

Table I: Distribution of patients by Degrees of hemorrhoids comparison (n=100)

Degrees	Group 1	Group 2
3 <sup>rd</sup>	32(64%)	33(66%)
4 <sup>th</sup>	18(36%)	17(34%)
Total	18(36%)	17(34%)

p value >0.05

Table II: Distribution of patients by operating time (n=100)

Time (minutes)	Group 1	Group 2
20-30	40(80%)	17(24%)
31-40	10(20%)	33(66%)`
Total	50(100%)	50(100%)
Mean±SD	28.40±3.0	31.5±2.20

p value >0.05

Table III: Distribution of patients by hospital stay (n=100)

Days	Group 1	Group 2
2	3(6%)	5(10%)
3	22(44%)	17(34%)
4	19(38%)	24(48%)
5	6(12%)	4(8%)
Mean±SD	3.56±0.78	3.46±1.01

p >0.05

Table IV: Distribution of patients by post op Infection (n=100)

Infection	Group 1	Group 2
Mild	8(16%)	7(14%)
Moderate	-	1(2%)
No	42(84%)	42(84%)
Total	50(100%)	50(100%)

P value >0.05

**DISCUSSION**

Haemorrhoidectomy is one of the most commonly performed anorectal procedure. Haemorrhoidectomy is currently the "gold standard" treatment for 3<sup>rd</sup> and 4<sup>th</sup> degree hemorrhoids. Although it is considered a minor procedure, the postoperative course is protracted and the postoperative complications are not negligible<sup>8</sup>. Two well established methods of radical surgical ablation of 3<sup>rd</sup> and 4<sup>th</sup> degree hemorrhoids are popular: the "open" Milligan-Morgan excision and the "closed" Ferguson's technique. Although decades of experience confirm the long-term clinical efficacy of these methods, both carry the risk of troublesome complications, as reflected in recent reports<sup>9,10</sup>. Many studies have shown there is no difference in both techniques<sup>11,12,13</sup>. Some studies have suggested that one technique is better than other in terms of post-operative results and complications<sup>14,15</sup>.

The aim of our study was to compare the two techniques of haemorrhoidectomy in terms of operating time, hospital stay, post-operative complications and analgesic requirements. In our study, group 2 took more time for operation. It may be due to increased time in re-closure of the anal mucosa. The mean time for group 1 was 28.40±3.01 min. as compared to the mean time of 31.50±2.25 min. in group 2. The results of this study match with other studies. In our study in group 2, 1 patient (2%) had severe pain 34 patients (68%) had mild pain. Whereas in group 1, one patient (2%) had severe pain 30 patients (60%) had mild pain. There was insignificant difference in post operative pain in the two groups (p=.413). In both groups the analgesic requirements were same (p<.05). Hemorrhage is also important post-operative complications. In our study in group 1, it was seen in 4 patients while in group 2, it was seen in 5 patients. In both techniques the bleeding was mild and all patients were treated conservatively. No significant difference was found in post-operative hemorrhage in two techniques (p=.655). The results match with other studies. In our study the mean post-operative stay in group 1, was 3.56±78 days while in group 2, the mean hospital stay was 3.46±1.01 days. p value not significant (p>0.05).

## CONCLUSION

As evaluated by the results it is concluded that closed haemorrhoidectomy took more operating time and resulted in rapid wound healing. However there was insignificant difference in hospital stay, post-operative pain, post op complications and analgesic requirement in closed and open haemorrhoidectomy. Both techniques were equally effective in the management of 3<sup>rd</sup> and 4<sup>th</sup> degree haemorrhoids.

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