

Postoperative complications of haemorrhoidectomy, a comparative analysis of open versus closed operating technique

Muhammad Ali, Shua Nasir, Sadaf Nazir, Lal Shehbaz, Muhammad Saad, Muhammad Absar Anwar, Ahmed Ali

Received:

6th June 2015

Accepted:

15th December 2015

Abstract

Object: The objective of our study is to compare and contrast the various early and late onset complications of open and closed haemorrhoidectomy procedure.

Material and methods: This is a randomized control trial, done for a period of 2 years from February 2013 to February 2015, at a tertiary care hospital in Karachi, Pakistan. There were 360 patients who presented to the hospital either via out patient clinics or through the accidents and emergency department with third and fourth degree hemorrhoids, and required a haemorrhoidectomy procedure. The patient population was divided into two groups, group A consisted of patients who would undergo the open or Milligan Morgan method of haemorrhoidectomy, and group B consisted of patients who would undergo the closed or Ferguson method of haemorrhoidectomy. The patients were seen and observed for a period of two months post operatively, and various complications of the procedures were noted and analyzed in the two groups.

Results: The age range of patients in group A was from 20 – 70 years of age, with a mean age of 42 years (SD +/- 12.45), the age range in group B was from 21 -69 years with a mean age of 40 years (SD +/- 11.23), the male to female ratio was 2:1.6. The urinary retention as observed on the day of operation was in 13 (7.22%) patients in group A, and in 5 (2.77%) patients in group B. The incidence of hemorrhage was seen in 8 (4.44%) patients in group A, and in 4 (2.22%) patients in group B. Infection of the wound was seen in 14 (7.77%) patients in the Milligan Morgan technique group and 13 (7.22%) in the Ferguson technique group. 1 (0.55%) patient in group A had anal stenosis.

Conclusion: According to our study, there is no statistically significant difference when it comes to the post operative complications of haemorrhoidectomy procedure (both open and closed technique).

Keywords: Milligan Morgan open haemorrhoidectomy, Ferguson closed haemorrhoidectomy, wound infection, anal stenosis hemorrhoids

Ziauddin University
Hospital, Karachi.

M Ali
S Nasir
L Shehbaz
A Ali

Abbasi Shaheed Hospital,
Karachi.
S Nazir

Dow University of Health
Sciences, Karachi.

M Saad
MA Anwar

Correspondence:

Dr Ahmed Ali
House No. A – 139, Block
I, North Nazimabad,
karachi.
cell: 0333-2143259
email: doctor.karachi@
gmail.com

Introduction:

The treatment of hemorrhoids has always been a topic of discussion and debate in the medical community¹. The treatment is mainly focused on the symptoms and the degree of hemorrhoids present. First and second degree hemorrhoids are treated conservatively, and options include but are not limited to increasing water intake, increasing the bulk of stools by taking high fiber diet and avoiding excessive straining while passing stools. In interventional techniques, injection sclerotherapy, infrared photocoagu-

lation, cryotherapy, band ligation and bipolar diathermy are the available options². For the treatment of advanced third and fourth degree hemorrhoids, haemorrhoidectomy is the option that is used for treatment. The two techniques are open and closed Milligan Morgan, Ferguson techniques respectively. There are many comparison studies done on the two methods of haemorrhoidectomy, but data is lacking from this region of the world. Our study is aimed for this purpose. We are studying the outcome and complications of the two methods. Although ac-

cording to the medical literature the closed technique is a superior method, in our setup open method is used commonly, our study also aims to clear any ambiguity regarding the standard quality procedure that holds the test of time, for the treatment of hemorrhoids, at the same time decreasing the morbidity and mortality by establishing a superior technique.

Materials and methods:

The method of study is a randomized control trial, done for a period of 2 years from February 2013 to February 2015, at a tertiary care hospital in Karachi, Pakistan. The patient population consisted of 360 patients, who presented to the hospital either via out patient clinics or through the accidents and emergency department with third and fourth degree hemorrhoids, and required a haemorrhoidectomy procedure. An informed consent was duly signed by all the study population, and demographic data was collected using a questionnaire, which included fields such as, age, sex, ethnicity, job, education, family history of hemorrhoids etc. The patient population (age range from 20 years to 70 years) was divided into two groups (alternatively), group A consisted of patients who would undergo the open or Milligan Morgan method of haemorrhoidectomy, and group B consisted of patients who would undergo the closed or Ferguson method of haemorrhoidectomy. The patients were seen and observed for a period of two months post operatively, and various complications of the procedures were noted and analyzed in the two groups including the healing time, urinary retention, incontinence, infection, bleeding, stenosis of the anal canal, and fissures.

Data was analyzed using SPSS version 20, and a p value of less than 0.05 was considered as significant.

Results:

Each group consisted of 180 patients. The age range of patients in group A was from 20 – 70 years of age, with a mean age of 42 years (SD +/- 12.45), the age range in group B was from 21-69 years with a mean age of 40 years (SD

+/- 11.23), the male to female ratio was 2:1.67 (male predominance). The duration of wound healing in the open technique group was 22.5 days (SD +/- 5.66) when compared with that in the closed technique group of 15 days (SD +/- 4.1), the urinary retention as observed on the day of operation was in 13 (7.22%) patients in group A, and in 5 (2.77%) patients in group B, no statistical significance was seen with the use of chi square test, as the p value was greater than 0.05. Refer to Table 1 again no statistical significance was seen with the use of chi square test, as the p value was greater than 0.05 that is a p-value of 0.258 respectively. Infection of the wound was seen in 14 (7.77%) patients in the Milligan Morgan technique group and 13 (7.22%) in the Ferguson technique group again no statistical significance was seen with the use of chi square test, as the p value was greater than 0.05 that is a p-value of 1.000 respectively. Other complications like stenosis of the anal canal, fissures and incontinence was not observed in any patients belonging to group B, but in patients belonging to group A, 1 (0.55%) patient developed steno-

Table 1: Comparative analysis of open and closed technique of haemorrhoidectomy

Complications	Group a n= 180	Group b n= 180	P-value
time duration of wound healing	22.5 days (SD +/- 5.66)	15 days (SD +/- 4.1)	
stenosis of the anal canal	1 (0.55%)	0 (00%)	0.088
infection	14 (7.77%)	13 (7.22%)	0.235
urinary retention	13 (7.22%)	5 (2.77%)	1.000
haemorrhage	8 (4.44%)	4 (2.22%)	1.000

sis of the anal canal and had to undergo dilatation procedures.

Discussion: In our study the mean age of the patients was 41 years, and we had a male predominance in the study population with a male to female ratio of 2:1.67, which is comparable to a recent study which had the mean age of patients at 43.5 years.³ The time required for the healing of wound in the open technique group in our study was 22.5 days compared to 15 days in the

closed technique group, which is similar to other studies who measure the time duration being from 28 to 34 days in the open haemorrhoidectomy group and from 12 to 17 days in the closed haemorrhoidectomy group^{4,5}. Patients developed post operative retention of urine either due to pain, or due to the use of spinal anaesthesia, which is more commonly observed in elder males, and some studies attribute this to the use of closed technique of haemorrhoidectomy⁵, and other studies have found that associated pain and urinary retention is lower in the closed technique group^{5,7}. In our study the incidence of retention of urine was close to three times in the open technique group when compared with the closed technique group, but the data was not statistically significant. In our study the incidence of hemorrhage in the open technique group was more than two times as compared with closed haemorrhoidectomy group, the results are comparable to other studies^{4,5}. In our study we observed that the rate of infection was similar, but some studies have observed that infection rate is more common in the closed haemorrhoidectomy group when compared with the open haemorrhoidectomy group⁸. In our study the incidence of late onset complications were negligible, only one unfortunate patient developed anal stenosis in the open technique group, the remaining complications like fissure and anal incontinence were not observed in any patient.

Conclusion:

We conclude there is no statistically significant difference when it comes to the post operative complications of haemorrhoidectomy whether we perform haemorrhoidectomy by open method (Malligen Morgan) or closed procedure (Ferguson technique).

Role and contribution of authors:

Dr Muhat Ali, concept drafting and final layout

Dr Shua Nasir, drafting write up

Dr Sadaf Nazir, data collecting analysis

Dr Lal Shehbaz, writeup data collecting

Dr Muhammad Saad data collecting data entering

Dr Muhammad Absar Anwar data entering and statistical analysis

Dr Ahmed Ali statistical analysis and final layout

Conflict of interest: None

References:

1. Thomson WH. Anus. In: Morris PJ, Malt RA editors. Oxford Textbook of surgery. New York: Oxford University Press 1994;1125–36.
2. William NS. The anus and anal canal. In: Russell RCG, William NS, Bulstrode CJK editors. Bailey. Love short practice of surgery. 24th ed. London. Arnold 2004;1255–62.
3. Aroya A, Perez F, Miranda E, Serrano P, Candela F, Lacueva J, et al. open versus closed day case haemorrhoidectomy, is there any difference ?Results of a prospective randomized study. *Int J Colorectal Dis* 2004;19(4):370–3.
4. Ahmed A, Noor F, Hussain R, Chowdry Z, Qadir S. Strengths and limitations of close vs. open haemorrhoidectomy in patients of 2nd and 3rd degree haemorrhoids. *Ann KE Med Coll* 2003;9:219–20.
5. Malik GA, Wahab A, Ahmed I. Haemorrhoidectomy: Open Versus closed technique. *J Surg Pak* 2009;14(4):170–2.
6. Shoaib M, Ali AA, Naqvi N, Gondal KM, Chaudhry AM. Open versus closed haemorrhoidectomy, an experience at Mayo Hospital. *Ann KE Med Coll* 2003;9:65–8.
7. You SY, Kim SH, Chung CS, Lee DK. Open VS closed haemorrhoidectomy. *Dis colon Rectum* 2005;48(1):108–13.
8. Mik M, Rzetecki T, Sygut A, Trzcinski R, Dziki A. Open and closed haemorrhoidectomy for fourth degree haemorrhoids--comparative one center study. *ActaChirLugosl* 2008;55(3):119–25.