



ORIGINAL ARTICLE

Comparison of post-operative pain in stapled haemorrhoidectomy versus open haemorrhoidectomy.

Asrar Ahmad Khan¹, Sultan Mahmood Khan², Shoukat Ali³, Shaheer Sultan⁴, Asif Rashid Alamgir⁵, Faisal Bilal Lodhi⁶

Article Citation: Khan AA, Khan SM, Ali S, Sultan S, Alamgir AR, Lodhi FB. Comparison of post-operative pain in stapled haemorrhoidectomy versus open haemorrhoidectomy. Professional Med J 2024; 31(10):1413-1417. <https://doi.org/10.29309/TPMJ/2024.31.10.8264>

ABSTRACT... **Objective:** To compare mean post-operative pain in stapled haemorrhoidectomy versus open haemorrhoidectomy. **Study Design:** Randomized Control Trial. **Setting:** Department of Surgery, Allied Hospital Faisalabad. **Period:** 18-04-2021 to 17-10-2021. **Methods:** There are 94 patients that fill the concert form that agree in this study. The presenting complaints that included such as bleeding per anus ,prolapsed of the mucosal membrane, hardening of stool and itching of rectum that were noted. Complete history was taken and physical examination was done as per rule. There are two groups arranged where patients are divided in this group with a well-mannered numerical method. Patients having the group that labeled as Group A underwent open haemorrhoidectomy that compare with the patients that labelled with as Group B with stapled haemorrhoidectomy. All operations were done by same surgical team .All patients were retained in surgical ward in surgical department of Allied hospital Faisalabad .there are several post-operative therapies were taken for reducing the pain and recommend the analgesic NASIDS in the form of Intravenous rout. In the first post-operative day of treatment I/v Paracetamol were administered for 08 hours. NSAIDS and other pain killers were administered in the form of Diclofenac 50mg for the next five post-operative days. However, these medications were administered in both groups that labeled as Group a and Group B of the patients. **Results:** Comparison of post-operative pain in both groups shows 2.28+0.45 pain in Group-A and 1.26+0.49 in Group-B, p value is 0.0001. **Conclusion:** The conclusion that showed post-operative pain is significantly lower in stapled haemorrhoidectomy when compared with open haemorrhoidectomy in 3rd and 4th degree of haemorrhoids.

Key words: Haemorrhoids, Postoperative Pain, Stapled Haemorrhoidectomy.

INTRODUCTION

In haemorrhoids, the anal canal venous plexuses become engorged. It can lead to bleeding, thrombosis, prolapsed, pain.¹ In haemorrhoidal abnormality that effects approximately 4.4-36 percent of the major citizenry in Europe country. However, that has been estimated about more than 50% of the community that having age >50 years suffering haemorrhoidal abnormality and in this critical situation in the Europe country.² Therefore, in literature review of Pakistan, there are at least fifty percent of the individual above the age of 50 years have some issues that shows the degree of discomfort from haemorrhoids.³ They show the fear and shyness to avoid the medical treatment. This is the main reason of this haemorrhoidal disease in this population.

In Worldwide, in the general population the prevalence of symptomatic hemorrhoids is almost about 4.4 percent. However, in the United States, there are 10 million people even more with hemorrhoids seek medical treatment, that gives result in 1.5 million related prescription per year. Hemorrhoidectomies are becoming less common in US hospital. In 1974, the number of hemorrhoidectomies per 100,000 persons reached a peak of 117; by 1987, the rate had dropped to 37. Part of this decrease can be attributed to hemorrhoid treatment received in offices and as an outpatient.

Hemorrhoidal disease patients are predominantly white, come from higher socioeconomic backgrounds, and reside in rural areas.

1. MBBS, FCPS, Assistant Professor Surgery, FMU, Faisalabad.
2. MBBS, MS (General Surgery), Associate Professor Surgery, Aziz Fatimah Medical College, Faisalabad.
3. MBBS, FCPS, Assistant Professor Surgery, FMU, Faisalabad.
4. MBBS, Registrar Surgical Unit-II, Allied Hospital, Faisalabad.
5. MBBS, MS (Anesthesia), Associate Professor Anesthesia, Aziz Fatimah Medical College, Faisalabad.
6. MBBS, FCPS, Principal and Head Surgical Unit-II, Allied Hospital, Faisalabad.

Correspondence Address:
Dr. Sultan Mahmood Khan
Department of Surgery
Aziz Fatimah Medical College, Faisalabad.
drsultanmahmoodkhan@gmail.com

Article received on: 31/05/2024
Accepted for publication: 15/08/2024

Men are more likely to seek treatment than women, although there is no established sex preference. Pregnancy, however, brings about physiological alterations that put women at risk of experiencing hemorrhoids. The inferior vena cava is compressed by the expanding gravid uterus, which results in distal engorgement and a reduction in venous return. Younger and middle-aged persons are more likely than older adults to get external hemorrhoids. The frequency of hemorrhoids rises with age, reaching a maximum in individuals between the ages of 45 and 65. The self-reported prevalence of symptomatic hemorrhoids was 4.4% in a large cross-sectional survey carried out in the United States.^{4,10}

METHODS

Haemorrhoids are classified into four degrees. The third and fourth include severe prolapsed requiring surgical intervention. This randomized control trial was conducted from April 2021 to October 2021 at Department of Surgery, Allied Hospital, Faisalabad after approval from ethical committee (48ERC/FMU/2023-24/435).

Patients of 3rd and 4th degree haemorrhoids were enrolled in study for comparing post-operative pain in stapled haemorrhoidectomy and open haemorrhoidectomy. The total number of patients were randomly split into two groups One group labelled as Group A (Stapled Haemorrhoidectomy) on the other hand second group noted as Group B (Open Haemorrhoidectomy). The main objective are post-operative pain. The mean pain score in the patients having Group A at 48 Hours that was 1.65-LO.813 on the other hand the patients having Group B was 2.58-L1.04, that is statistically more beneficial (p value 0.001). There are very limited number of available studies in Pakistan on this procedure. The rationale of this study is therefore to improve knowledge and to find the better procedure in terms of post-operative pain, so that it can be recommended to other surgeons.

Selection Criterion

Inclusion Criteria

- Patients aged 20 to 70 years
- Patients of both gender

- Diagnosed case of 3rd and 4th degree haemorrhoids presenting to OPD. (Confirmed on proctoscopy)

Exclusion Criteria

- Patients with 1st and 2nd degree haemorrhoids. (Confirmed on proctoscopy)
- Patients having concomitant anal pathology like fissure in ano, fistula in ano. (Determined on history and physical examination)
- Patients with infected or thrombosed haemorrhoids. (Determined on history and physical examination)
- Pregnant patients
- Haemorrhoids in cirrhotic patients (determined on history and physical examination)

Data Collection Procedure

The Surgical OPD of Allied Hospital Faisalabad enrolled 94 patients who met the inclusion criteria. After outlining the goal of the study, signed informed consent was obtained. Regarding age and gender was noted as a demographic data. However a different symptoms showed as bleeding per rectum, constipation, mucosal prolapse and pruritus were recorded. Therefore physical examination and complete history was taken from the patients. Lab investigations were taken such as CBC, RFT, LFT, serum electrolyte and even chest X ray. The degree of haemorrhoids was noted, therefore haemorrhoids were confirmed by proctoscopy. All patients were taken a single dose of antibiotic, in metronidazole 500mg. Patients were divided into two groups by using lottery method. However, the patients having Group A underwent open haemorrhoidectomy while the patients having Group B underwent stapled haemorrhoidectomy. Same surgical team were done all operations. For 48 hours all patients were retained in surgical ward. For the next five post-operative days in both the member of the groups were taken pain reducing medication such as intravenous Paracetamol for 12 hours in day first and then followed by oral NSAIDS in the form of Diclofenac 50mg for 08 hours. However, additional pain killers were recommend as a supplement for reducing the pain of the patient. The number of rescue doses were noted. At 48 hours, post-operative pain was measured by

using visual analogue scale that ranges from 0 to 5. Discharged all the patients after 48 to 49 hours of surgery with the advice of sitz baths and analgesics as per requirement along with soft stools. Data was entered in performa in a special manner.

RESULTS

A total of 94(47 in two equal groups) cases fulfilling the selection criteria were enrolled to compare mean post-operative pain in stapled haemorrhoidectomy versus open haemorrhoidectomy. Age distribution showed that 70.21%(n=33) in Group-A and 74.47%(n=35) in Group-B were between 20-50 years of age whereas 29.79%(n=14) in Group-A and 25.53%(n=12) in Group-B were between 51-70 years of age, mean age was calculated as a 43.19+10.52 years in Group-A and 43.09+8.44 years in Group-B. (Table-I)

According to gender distribution 74.47%(n=35) in Group-A and 72.34%(n=34) in Group-B were male while 25.53%(n= 12) in Group-A and 27.66%(n=13) in Group-B were females. (Table-II)

Degree of haemorrhoids showed that 85.11% (n=40) in Group-A and 82.98%(n=39) in Group-B had III degree of a haemorrhoids whereas 14.89% (n=7) in Group-A and 17.02% (n=8) in Group-B had IV degree of haemorrhoids. (Table-III)

ASA status showed that 80.85% (n=38) in Group-A and 82.98% (n=39) in Group-B had ASA I whereas 19.15% (n=9) in Group-A and 17.02% (n=8) in Group-B had ASA II. (Table-IV)

Comparison of postoperative pain in both groups showed a 2.28+0.45 pain Group-A and 1.26+0.49 in Group-B, p value was 0.0001. (Table-V)

Effect modifiers like age, gender, degree of haemorrhoids and a ASA class were addressed through stratification of data. Post stratification independent t-test was applied and p-value ≤ 0.05 was taken as statistical significant. (Table-IV-IX)

Age (in years)	Group-A (n=47)		Group-B (n=47)	
	No. of Patients	%	No. of Patients	%
20-50	33	70.21	35	74.47
51-70	14	29.79	12	25.53
Total	47	100	47	100
Mean+ SD	43.19+10.52		43.09+8.44	

Table-I. Age distribution (n=94)

Gender	Group-A (n=47)		Group-B (n=47)	
	No. of Patients	%	No. of Patients	%
Male	35	74.47	34	72.34
Female	12	25.53	13	27.66
Total	47	100	47	100

Table-II. Gender Distribution (n=94)

Degree	Group-A (n=47)		Group-B (n=47)	
	No. of Patients	%	No. of Patients	%
III	40	85.11	39	82.98
IV	7	14.89	8	17.02
Total	47	100	47	100

Table-III. Degree of hemorrhoids (n=94)

ASA	Group-A (n=47)		Group-B (n=47)	
	No. of Patients	%	No. of Patients	%
I	38	80.85	39	82.98
II	9	19.15	8	17.02
Total	47	100	47	100

Table-IV. ASA status of the patients (n=94)

Pain Score	Group-A (n=47)		Group-B (n=47)	
	Mean	SD	Mean	SD
	2.28	0.45	1.26	0.49

Table-V. Comparison of postoperative pain in both groups (n=94)
P value=0.001

Age (in years)	Group-A (n=47)		Group-B (n=47)		P-Value
	Mean	SD	Mean	SD	
20-50	2.24	0.44	1.11	0.32	0.0001
51-70	2.36	0.50	1.67	0.65	0.005

Table-VI. Stratification for age

Gender	Group-A (n=47)		Group-B (n=47)		P-Value
	Mean	SD	Mean	SD	
Male	2.26	0.44	1.24	0.50	0.0001
Female	2.33	0.49	1.31	0.48	0.0001

Table-VII. Stratification for gender

ASA	Group-A (n=47)		Group-B (n=47)		P-Value
	Mean	SD	Mean	SD	
I	2.26	0.45	1.15	0.37	0.0001
II	2.33	0.50	1.75	0.71	0.06

Table-VIII. Stratification for ASA

Degree	Group-A (n=47)		Group-B (n=47)		P-Value
	Mean	SD	Mean	SD	
III	2.15	0.36	1.13	0.34	0.0001
IV	3.01	0.1	1.88	0.64	0.0005

Table-IX. Stratification for degree of hepiorrhoids

DISCUSSION

There are prolonged time for patients with hemorrhoid surgery to return the normal activities, the 3rd and 4th degree hemorrhoids⁵ is prevent with surgery but the persistence pain is the most common complaint after the hemorrhoids surgery, however the patient stay prolonged in a hospital with a uncontrolled pain complaint.⁶ After the surgery of haemorrhoids, there are many procedures were adopted to reduce the pain such as surgical intervention with pharmacological management. Although the prime evidence based pain treatment remains undifferentiated as there was no systematic studies of pain therapy approaches after haemorrhoids surgery that is haemorrhoidectomy has carried out.⁷

There are very inadequate statistics of existing studies in Pakistan on this technique. The justification of this paper is thus to enhance information and to find the better procedure in terms of post-operative pain, so that it can be recommended to other surgeons.

In our study, of 94 cases (47 in each group), mean age was calculated as 43.19+10.52 years in Group-A and 43.09+8.44 years in Group-B, 74.47%(n=35) in Group-A and 72.34%(n=34) in Group-B were male while 25.53%(n=12) in Group-A and 27.66%(n=13) in Group-B were females, comparison of postoperative pain in both groups showed 2.28-1-0.45 pain Group-A and 1.26+0.49 in Group-B, p value was 0.0001.

In previous study⁹ patients of 3rd and 4th degree haemorrhoids were enrolled in study for comparing post-operative pain in stapled haemorrhoidectomy and open haemorrhoidectomy. The total patients

that were divided into two groups for randomized study. Group A (Stapled Haemorrhoidectomy) while Group B (open Haemorrhoidectomy). The post-operative pain is the main major issue. The mean of pain score in Patient having Group A at 48 hours was 1.65-1.0.813 on the other hand the patients having Group B was 2.58-1.04, that is statistically very effective or beneficial (p value 0.001).

There are two hemorrhoidectomy one are conventional hemorrhoidectomy and other stapled hemorrhoidectomy are more popular that are used to treat the symptomatic and prolapsing having 2nd, 3rd and 4th grading of internal hemorrhoids, In our review there are limitation of people or techniques we did not compare both techniques of having other symptomatic complaints which may be done in coming soon trials. However, in our study, being the limitation, we did not compare both techniques in terms of other complications, which may be done in coming trials.

CONCLUSION

The conclusion of this review that post-operative is beneficially lower in stapled hemorrhoidectomy when compared with open hemorrhoidectomy in 3th degree and 4th degree hemorrhoids.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

SOURCE OF FUNDING

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.






Copyright© 15 Aug, 2024.

REFERENCES

- Shinde P, Chawada NI, Deshmukh S. **A study of surgical profile of patients with haemorrhoids at tertiary care hospital.** IntSurg J. 2019; 6(3):916-21.
- Wang T, Kiu K, Yen M, C hang T. **Comparison of the short-term outcomes of using DST and PPH staplers in the treatment of grade III and IV haemorrhoids.** SciRep. 2020; 10(1):e5189.

3. Ravindranath GG, Rahul BG. **Prevalence and risk factors of haemorrhoids: A study in a semi-urban centre.** IntSurg J. 2018; 5(2):496-9.
4. Khaliq T, Shah A, Mehboob A. **Title [Internet].** Ayubmed.edu.pk. 2020 [cited 22 August 2020].
5. Eskandaros MS, Darwish AA. **Comparative study between Milligan-Morgan haemorrhoidectomy, stapled hemorrhoidopexy, and laser hemorrhoidoplasty in patients with third degree haemorrhoids: A prospective study.** Egypt J Surg. 2020; 39:352-63.
6. Gupta p, Kundra D, Khanna A, Aggarwal A, Kapoor K. **Our initial experience of three versus two rows circular stapler devices for stapled hemorrhoidopexy: A single institution review of 224 cases.** IntSurg J. 2020; 7(3):685-8.
7. Eberspacher C, Mascagni p, Di Nardo D, Pironi D, pontone S, Martellucci J, et al. **Caiman versus ligasurehaemorrhoidectomy: Post-operative pain, early complications, long-term follow-up, and costs.** SurgInno. 2020; 27(3):272-8.
8. Ray-Offor E, Amadi S. **Haemorrhoidal disease: Predilection sites, pattern of presentation, and treatment.** Ann Afr Med. 2019; 18(1):12.
9. Irfan F, Salim M, AbidKi. **Outcome of stapled haemorrhoidectomy versus open haemorrhoidectomy: A randomized trial.** Pak J Med Heal Sci. 20 14; 8(2):49 1-8.
10. Johanson JF, Sonnenberg A. **The prevalence of hemorrhoids and chronic constipation. An epidemiologic study.** Gastroenterology. 1990; 98(2):380.

AUTHORSHIP AND CONTRIBUTION DECLARATION

No.	Author(s) Full Name	Contribution to the paper	Author(s) Signature
1	Asrar Ahmad Khan	Principal Author.	
2	Sultan Mahmood Khan	Data analysis.	
3	Shoukat Ali	Statistical analysis.	
4	Shaheer Sultan	Manuscript designing, data collection.	
5	Asif Rashid Alamgir	Review of literature.	
6	Faisal Bilal Lodhi	Proof reading.	