

Outcome of Stapled Haemorrhoidectomy versus Open Milligan Morgan Haemorrhoidectomy at Allied Hospital

Rana Asrar Ahmad Khan, Muhammad Saleem Iqbal, Osman Riaz, Ata-ul-Latif, Sultan Mahmood Khan

ABSTRACT

Objective: To compare the postoperative outcome of stapled haemorrhoidectomy and conventional Milligan Morgan's haemorrhoidectomy at Allied Hospital. **Study Design:** Simple comparative study. **Place of Study:** Surgical Unit 1, Allied Hospital Faisalabad. **Duration of Study:** January 2011 to September 2012. **Sample size:** 50 patients. **Material & Methods:** Fifty patients of 3rd and 4th degree hemorrhoids were selected for admission from the outpatient department. Patients with additional anal disease (e.g. fissure, abscess, fistula, ano-rectal cancer etc.) were excluded. Two groups of twenty five each were made. Group A for stapled haemorrhoidectomy and Group B for Milligan-Morgan haemorrhoidectomy (MMH). The operative time was measured in minutes. Postoperative pain was assessed through visual analogue scale (VAS). Bleeding was measured as mild, moderate and profuse. Other post-operative complications during hospital stay like urinary retention, anal stenosis etc. were noted. T-test, chi-square test and repeated measured analysis of variance were applied to compare the variables. **Results:** A majority of patients (combined in both groups) had third degree haemorrhoids. The mean length of

operative time was found statistically insignificant between stapled and open groups (34 vs 36 minutes). In Group A 23 (92%) patients were discharged in 24 hrs while 2 (8%) patients were discharged after 24 hrs. In Group B 9 (36%) patients were discharged in 24 hrs and 16 (64%) patients were discharged after 24 hrs. In group A 19 (76%) patients were having mild bleeding, 5 (20%) moderate bleeding and 1 (4%) profuse bleeding. In Group B 7 (28%) patients were having mild, 16 (64%) moderate and 2 (8%) profuse bleeding. In Group A 15 (60%) patients were having mild pain, 7 (28%) moderate and 3 (12%) severe pain on visual analogue scale. In Group B 4 (16%) patients were having mild pain, 15 (60%) moderate and 6 (24%) severe pain. The proportion of postoperative anal stenosis, prolapsed recurrence, persistent pain, recurrent bleeding and urinary retention was higher in MMH than stapled haemorrhoidectomy group. **Conclusion:** There was a significant difference between stapled haemorrhoidectomy and Milligan Morgan's for bleeding, pain and hospital stay. However the mean length of operative time was insignificantly different. **Key words:** Haemorrhoid, Milligan Morgan, Stapled haemorrhoidectomy. Postoperative pain, Hospital stay.

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INTRODUCTION

Haemorrhoidal disease is one of the most common ano-rectal conditions¹. Hemorrhoids are defined as dilatation of internal venous plexus with displaced anal cushions. Haemorrhoids occurs when these anal cushions become engorged or the tissue prolapse into the anal canal due to engorgement of

blood vessels and laxity of the surrounding connective tissue. Classically they occur in the 3, 7 and 11 o'clock position with the patient in lithotomy position. External haemorrhoids are aggregations of congested external perianal vascular plexus covered by perianal skin; while, internal haemorrhoids originate from the sub-epithelial plexus of the anal canal above the dentate line. Internal haemorrhoids may be classified according to the degree of prolapse into four degrees. The symptoms include discomfort, itching, mucous discharge, bleeding, pain, and prolapse and are associated with a feeling of fullness and incomplete evacuation. Treatment of haemorrhoids depends on degree of haemorrhoids.²

The best possible treatment of third and fourth degree haemorrhoids is haemorrhoidectomy³. Most conventional haemorrhoidectomies are performed in one of the two ways. Milligan Morgan technique (open method) as the wound is left open or Ferguson technique (closed method) in which wound is stitched^{2,3}.

Traditional open technique leaves large raw area which is difficult to manage and is associated with severe post operative pain and bleeding. It is also associated with complications like wound infection, oedema, major short-term incontinence and urinary retention Thus increasing morbidity and patient discomfort⁴.

Recently, a variety of instruments including circular stapler, ultrasonic scalpel, laser and a bipolar electrocautery have been used in an attempt to reduce postoperative pain and blood loss and to permit fast wound healing and a quicker return to normal activities⁵.

The technique of stapled haemorrhoidopexy which utilizes a purpose designed stapling gun was first described by Longo in 1998 as an alternative to conventional excisional haemorrhoidectomy⁶. Stapled haemorrhoidopexy, is a new and innovative surgical technique for the treatment of 3rd degree and 4th degree haemorrhoids, has rapidly evolved and become the procedure of choice for primarily internal haemorrhoids. In stapled haemorrhoidectomy, the ring of mucosa is excised proximal to the haemorrhoidal mass above the dentate line leaving no external wounds^{7,8}.

We have compared early results of open versus stapled haemorrhoidectomy in order to find any difference in postoperative pain, bleeding, operating time and hospital stay in patients admitted in Su-1 Allied Hospital Faisalabad.

Objective

The objective of the study was to compare postoperative pain, bleeding, operating time and hospital stay in patients undergoing conventional and stapled haemorrhoidectomy.

MATERIALS & METHODS

Study design: comparative study

Setting: In Surgical Unit-1 Allied Hospital Faisalabad.

Duration of study: From January 2011 to September 2012.

Sample size: 50 patients.

Group A: Underwent stapled haemorrhoidectomy.

Group B: Conventional milligan morgan technique.

Sample technique: Non-probability purposive sampling.

Sample selection

Inclusion criteria:

All patients between age 20 to 50 from either gender suffering from 3rd and 4th degree haemorrhoids were included in our study.

Exclusion criteria:

- 1-Patients suffering from thrombosed or strangulated haemorrhoids on clinical examination.
- 2-Patients having prior haemorrhoidectomy.
- 3- Concomitant anal pathology (e.g. anal fissure, fistula, abscess, malignancy).
- 4-Patient unfit for surgery.
- 5-Patient who refused to participate.

Operational definitions.

Bleeding Measured as

Mild. 1-2 wound dressings of 4x4 cm required on operative day.

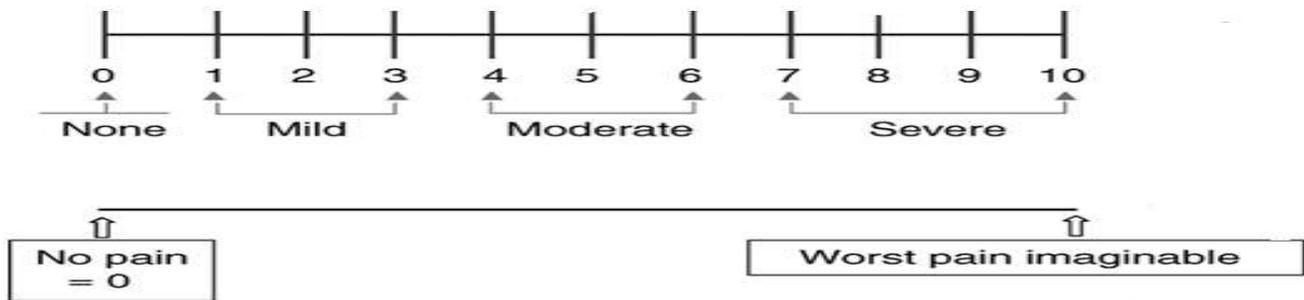
Moderate 3-4 dressings (4x4 cm) required on the operative day.

Profuse bleeding > 4 wound dressings (4x4 cm) required on the operative day.

Visual Analogue Scale (VAS)

Operationally a VAS is usually a horizontal line, 100 mm in length, anchored by word descriptors at each end, as illustrated in Fig. The patient

marks on the line the point that they feel represents their perception of their current state.



Third Degree Hemorrhoid:

A 3rd degree hemorrhoid bulges from the anus during bowel movements and must be pushed back in with a finger.

Fourth Degree Hemorrhoid:

A fourth-degree hemorrhoid protrudes from the anus all the time.

Surgical technique:

The study included 50 patients suffering from haemorrhoids selected through Out Patient Department (OPD). Patients were divided in two groups of twenty five each. Group A for Stapled Haemorrhoidectomy and Group B for Milligan Morgan Hemorrhoidectomy (MMH). Using non probability purposive sampling, a computer generated number was given for randomization. Patients who received even numbers were selected for MMH and all the patients on odd numbers were selected for Stapled Haemorrhoidectomy. Informed consent was taken after explaining the nature of study, risk/benefit and operative procedure to the patient. Base line investigations like complete blood count, random blood sugar, X-ray chest and ECG and fitness for anaesthesia was done prior to admission. Patients were nil per mouth (NPO) since mid-night and were given klean enema a night before surgery. Both procedures were performed under spinal anaesthesia (saddle) with the patient in the lithotomy position. The length of both procedures was taken as the time from the beginning of the operation until the application of dressings.

Stapled Hemorrhoidectomy

After inspection DRE and, then MDA done. The anal retractor and obturator were lubricated and introduced. After removal of the obturator, the purse string anoscope was inserted. A 2/0 Prolene purse string suture was placed about 5 cm above the dentate line. The anoscope was then

withdrawn and the stapling device introduced. The purse string suture was tightened, and both tails were pulled through the lateral ports of the stapler with the aid of the suture grasper. The closed stapling instrument was then fired and held closed for 30 seconds to aid hemostasis. The stapler was then removed with the retractor, and “doughnuts” were inspected for completeness. The staple line, which was in every case 3 cm above the dentate line, was inspected with the aid of the anal retractor and obturator. Any bleeding point was oversewn again. At the end of operation the anal canal was lightly packed with gauze dressing impregnated with 2 percent lignocaine gel, which was removed the following morning.

Open Hemorrhoidectomy

The open procedure was carried out according to the technique described by Milligan and Morgan . After retraction with forceps, each pile mass was dissected and excised with diathermy. The vascular pedicle was suture ligated. At the end of the procedure the anal canal was packed as in the stapled group

Postoperative care

Postoperative management consisted of standard nursing care and analgesia according to the patient requirements. Each patient was given a discharge prescription for Lactulose 20ml each day and Tab Flagyl 400 mg TDS. For pain Ibuprofen compounds was suggested.

Follow-up

An outpatient appointment was arranged for 10 days after surgery and patients were given an advice sheet and telephone number in case of emergency. At 6-month follow-up all patients were available for assessment.

Data analysis procedure

Statistical software “SPSS-10.0” was used for statistical analysis. The continuous response

variables like age, operative time, postoperative hospital stay, total length of hospital stay and pain score (VAS) were presented by mean \pm SD. T-test was applied to compare above mentioned continuous response variables. Repeated measured analysis of variance was performed for comparison of postoperative pain score on subsequent periods of times; the significance of effect between groups and within the subject. The chi-square test was applied to compare significance or proportions of above categorical variables between Open and Stapled Haemorrhoidectomy groups. P-value $<$ 0.05 was considered statistically significant in this study.

RESULTS

Sex distribution in both study groups

In Group A 18(72%) were males and 7(28%) were females in Group B 14 (56%) were males and 11(44%) were females.

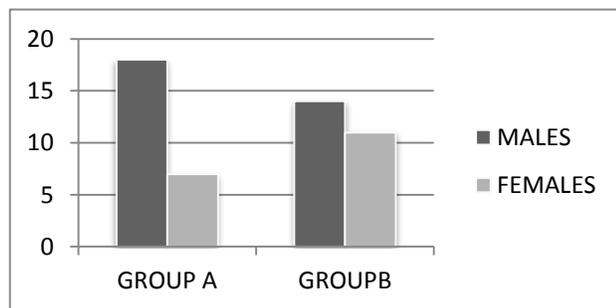


Fig 1: Sex distribution

Distribution of hemorrhoids in both groups

In Group A 15 (60%) were patients suffering from third degree hemorrhoids and 10 (40%) patients were with fourth degree hemorrhoids. In Group B 18 (72%) patients were of third degree hemorrhoids and 7 (28%) patients were having fourth degree hemorrhoids

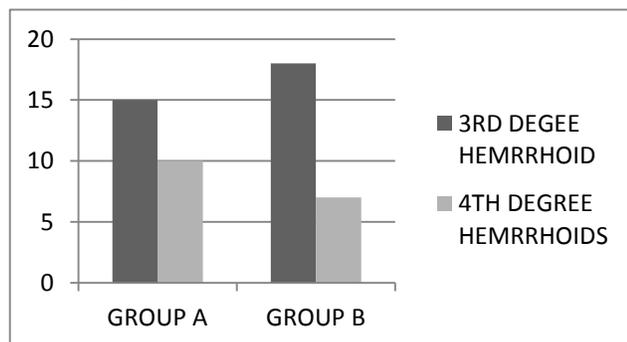


Fig 2: Distribution of hemorrhoids

Table 1: Characteristics of patients

	Group A	Group B
Sex		
Male	18 (72%)	14 (56%)
Female	7 (28%)	11 (44%)
Degree of Hemorrhoid		
III	15 (60%)	18 (72%)
IV	10 (40%)	7 (28%)

Duration of hospital stay

In Group A 23 (92%) patients were discharged in 24 hrs while 2 (8%) patients were discharged after 24 hrs. In Group B 9 (36%) patients were discharged in 24 hrs and 16 (64%) patients were discharged after 24 hrs.

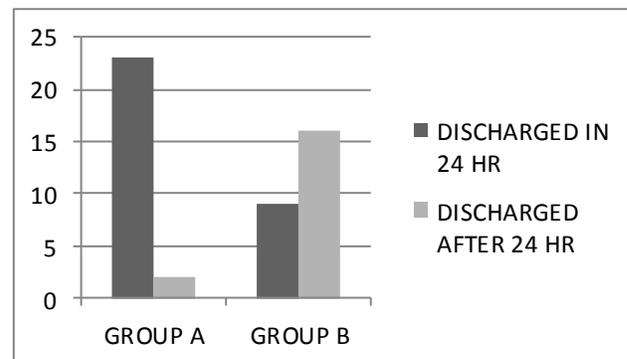


Fig 3: Duration of hospital stay

Bleeding

In group A 19 (76%) patients were having mild bleeding, 5 (20%) moderate bleeding and 1 (4%) profuse bleeding. In Group B 7 (28%) patients were having mild, 16 (64%) moderate and 2 (8%) profuse bleeding.

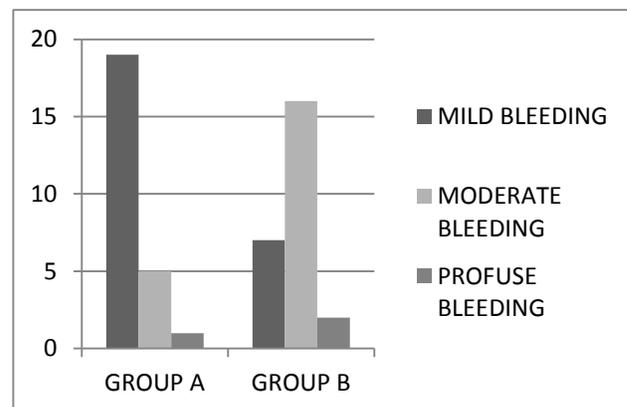


Fig 3: Bleeding

Table 2: Details of surgical treatment and secondary outcomes in both studied groups

	Group A	Group B
Duration of hospital stay (days):		
Pt discharged in 24 hr	23 (92%)	9(36%)
Pt discharge after 24 hr	2 (8%)	16(64%)
Bleeding:		
Mild bleeding	19 (76%)	7(28%)
Moderate bleeding	5(20%)	16(64%)
Profuse bleeding	1(4%)	2(8%)

Pain score

In Group A 15(60%) patients were having mild pain, 7 (28%) moderate and 3 (12%) severe pain on visual analogue scale. In Group B 4(16%) patients were having mild pain, 15(60%) moderate and 6(24%) severe pain.

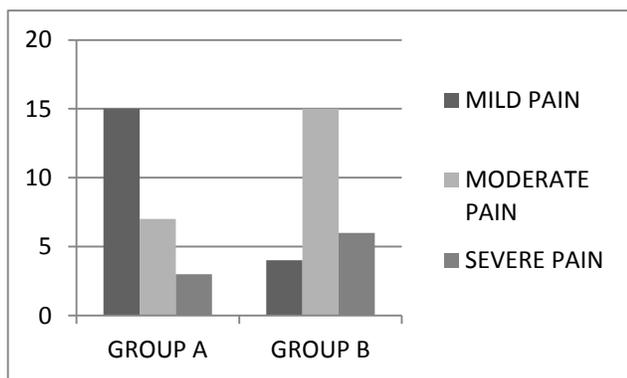


Fig 4: Pain score

Injection of Opiates

In Group A 14 (56%) patients needed no opiate injection, 7 (28%) one injection, 4 (16%) three injections and no patient needed more than three injections. In Group B 3 (12%) patients did not required any opiate injection, 6 (24%) one injection, 11 (44%) three injections and 5 (20%) more than three injections.

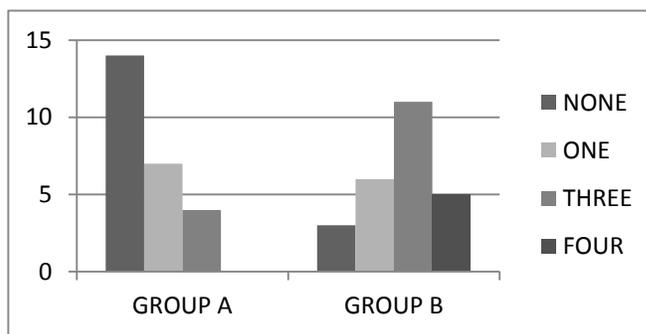


Fig 5: Injection of opiates

Table 3: Pain scores and the consumption of analgesia

	Group A	Group B
Average pain by VAS:		
Mild pain	15 (60%)	4 (16%)
Moderate pain	7 (28%)	15 (60%)
Severe pain	3 (12%)	6 (24%)
Injections of opiates:		
Non	14 (56%)	3 (12%)
One	7 (28%)	6 (24%)
Three	4 (16%)	11 (44%)
Four	0 (0%)	5 (20%)

Other postoperative complications

Others complications in Group A were anal stenosis 1 (4%), prolapse recurrence 1 (4%), persistent pain 2 (8%) and urine retention in 2 (8%) patients. In group b anal stenosis 7 (28%), prolapsed recurrence 3 (12%), persistent pain 4 (16%), recurrent bleeding 3 (12%) and retention of urine in 6 (24%) patients.

Table 4: Other postoperative complications

	Group A	Group B
Anal stenosis (%)	1 (4%)	7 (28%)
Prolapse recurrence (%)	1 (4%)	3 (12%)
Persistence pain (%)	2 (8%)	4 (16%)
Recurrent bleeding (%)	0 (0%)	3 (12%)
Urine retention (%)	2 (8%)	6 (24%)

DISCUSSION

Mean age of patients undergoing the procedure when compared to international and local studies

was not significantly different having similar pattern of distribution.

There was a difference in gender distribution when compared to international studies. This difference in gender distribution may be because females are less likely to seek medical attention due to cultural and social factors; unless their symptoms get worse. Due to this reason females present less as compared to males in our setup. Majority of the patients selected for stapled haemorrhoidopexy had 3rd degree (60%) while rest had 4th degree (28 %) and for MMH (56%) patient were having 3rd degree hemorrhoids and (44%) 4th degree. Our study have shown that the stapled procedure for hemorrhoids is associated with a significant improvement in postoperative pain control. Length of hospital stay was also significantly different between the two groups in this study and the patients of stapled group have shown early discharge from hospital.

Early and late postoperative complications in the Milligan-Morgan and stapled groups were almost similar to other published studies without great difference.^{4,6}

In our study majority of patients (92%) with stapler hemrrhoidectomy were discharged home in 24 hrs. This seems to be in agreement with a multicentre study in which 90.3% of patients were discharged home on first postoperative day.^{8,9}

Conclusion of another study is that conventional hemrrhoidectomy procedure is more invasive and slightly more painfull in immediate postoperative period than Stapler Hemrrhoidectomy, which is slightly more expensive.¹³

CONCLUSION

Stapled haemorrhoidectomy is safe with many short term benefits like less bleeding less post-operative pain, early return from hospital and early return to their normal activity.

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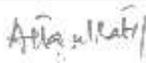
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