

MIPH versus Open Haemorrhoidectomy in a Tertiary Care Hospital –A Comparative Study

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ABSTRACT

Background: Haemorrhoids are one of the most common benign anorectal problems worldwide. The treatment of third- and fourth-degree haemorrhoids is surgical. Surgical haemorrhoidectomy and Stapled haemorrhoidopexy are the currently available surgical interventions in the management of haemorrhoids. The aim of the study is to evaluate the effectiveness of open haemorrhoidectomy with minimal invasive procedure for haemorrhoids (MIPH). **Methods:** 80 cases were selected for this study which were divided into two groups of 40 each. Open surgery (Milligan-morgan haemorrhoidectomy) was done in one group and MIPH in the other group. The follow up period was one year. The duration of post-operative pain, complications, level of satisfaction was documented. The relative merits and demerits of the procedures were assessed and the results documented. **Results:** MIPH is a safe and effective procedure in patients presenting with haemorrhoids. Duration of hospital stay is less and hence return to work is earlier. **Conclusion:** MIPH can be considered as a procedure of choice in patients presenting with grade II, grade III and grade-IV haemorrhoids.

Keywords: Haemorrhoids, Milligan –morgan open haemorrhoidectomy, MIPH.

INTRODUCTION

Haemorrhoids are one of the most common benign anorectal problems worldwide. The treatment of third- and fourth degree haemorrhoids is surgical. Haemorrhoidectomy is one of the most commonly performed anorectal operations. Milligan-Morgan Haemorrhoidectomy as described in 1937 has remained the most popular among many surgical techniques proposed.^[3] Haemorrhoids, piles is seen in 40 percent of population having symptoms such as pain during defaecation, bleeding and sometimes a protruding mass outside the anus. Morgagni attributed the upright erect posture of man as the culprit for haemorrhoids.^[1] Vascular cushion of the anal canal doesn't differ anatomically in normal individuals from those symptomatic patients. Cushion is omnipresent in all sexes, races and age of people but fifty percent patients are symptomatic.^[2]

The treatment is to give relief for the two chief symptoms like bleeding and protrusion of mass outside the anus.

Hippocrates described treatment which was very painful during pre-anaesthetic era and later use of

monopolar cautery is mostly used for this procedure.^[3] Now a wide array of treatment like dietary modification, bowel habits, mucosal fixation, widening of anus, excision of the internal anal vascular cushion and external vascular channels are some of the treatment options. Choice depends on the degree of prolapse, experience of the surgeon and availability of advanced gadgets. 40% patients require surgical treatment. Conventional haemorrhoidectomy is one of the most commonly performed operation and has good results. It is a very painful procedure resulting in a prolonged hospital stay (4-10 days) and time off work for 2-6 wks. Complications like reactionary or secondary haemorrhage,^[4] urinary retention and late complication like stenosis and incontinence are seen. A new and promising surgical method known as MIPH (Longo technique) is the treatment of choice which causes minimal post-operative pain as the anastomosis is above the dentate line and done by a stapler. Patients are discharged early and their return to work is earlier.

METHODS

This study was conducted in a tertiary care hospital from June 2016 to May 2017. 80 patients were included in this study. 40 patients underwent stapled haemorrhoidopexy and 40 patients were taken up for open haemorrhoidectomy. Advantages and disadvantages of both procedures was explained to

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both the patient group and patients were randomly allocated to one of the two surgeries after taking an informed consent.

Inclusion Criteria

1. Large Grade II Haemorrhoids
2. Grade III Haemorrhoids
3. Grade IV Haemorrhoids
4. Patients fit for anaesthesia.

Exclusion Criteria

1. Patient having Grade I Haemorrhoids
2. Any associated diseases like fissure or fistula
3. Patients with bleeding diathesis and
4. Pregnant ladies

A total no of 80 patients were selected with the following inclusion and exclusion criteria in this hospital for this study. The patients were subjected to detailed history taking and the presenting symptoms were noted. Details of previous treatment, family history, personal history, general and systemic examination was done. Per digital rectal examination and proctoscopy was done according to the protocol. General condition of the patients were assessed after routine blood investigations. Following assessment, cases were randomly allocated to one of the two treatment group. Pre-operative preparations like nothing by mouth for 8 hours before surgery, proctoclysis enema and prophylactic antibiotic coverage was done. All patients were operated in lithotomy position under spinal anaesthesia in a tertiary care hospital. Intra operative findings, haemodynamics and complications were noted in all patients.

RESULTS

80 patients were included in this study and divided into two groups.

Gr-A: Those who underwent MIPH (40patients)

Gr -B: Those who underwent Milligan Morgan open procedure (40patients)

Following observations were made

1. Patients characteristics –Age and Sex
2. Intra operative blood loss
3. Post-operative pain score(at 12 hrs,24 hrs,3 days,7 days, and 15 days)
4. Complications
5. Duration of hospital stay
6. Numbers of days for return to work
7. Level of patients satisfaction

Table 1:Age Distribution In Study

	Group A	Group B
Range (yr)	24-79	24-74
Mean (yr) S.D.	48.85	51.23

Hence the age difference in group A and group B is not statistically significant.

Table 2:Sex Distribution Study

	GROUP A	GROUP B
Males	25	26
Females	15	14

In this study, 50 patients were males and 30 were females

Table3:Presenting Features

Symptoms	N (N=80)
Bleeding	58
Prolapse	60
Constipation	68
Itching	9

Patients usually had more than one symptom at the time of presentation

Table 4:Duration of Symptoms

Symptoms	N (N=80)
<1 Month	6
1-12 Month	24
>12 Month	50

50 patients had symptoms more than 12 months period.

Table5: Associated Conditions

	N (N=80)
Anaemia (Hb<10 G %)	35
Hypertesion	22
Pulmonary TB	3
DM-II	6
Inguinal Hernia	5

Anaemia was commonly associated. Out of 80 patients, 35 patients were anaemic.

Table6:Degree of Haemorrhoids

Grading	N(%)
Grade II	16(20%)
Grade III	60(75%)
Grade IV	4(5%)

Out of 80 patients, 60 patients (75%) had grade-III haemorrhoids.

Table 7:Intraoperative Blood Loss

Group	Mean(ml)	Range(ml)
A	65.8	50-90 ml
B	154	80-110ml

It was calculated by estimating the no of gauze pieces soaked with blood and multiplying it by 10. P- Value is <0.001.So difference in blood loss between two procedures is highly insignificant.

Table 8:Operative Time

Group	Mean(min)	Range(min)
A	36	25-42
B	53	35-58

P- value is <0.001.So difference in operative time between two procedure is highly insignificant.

Table 9: Hospital Stay

Group	Mean(days)	Range
A	1.6	1-5
B	2.68	1-4

So difference in hospital stay between two procedures is highly significant.

Table 10: Complications

	Group A	Group B
Urinary retention	5	12
Haemorrhage	8	16
Incontinence	1	6
Increases defecation frequency	6	8
Anal discharge	1	5

Table 11: Long Term Sequele in Follow Up

	N=40	N=40
Recurrent	-	-
Skin tag/fibrosis	-	7
Stenosis	-	-

Table 12: Level of Satisfaction –Patients Evaluation

	Group A	Group B
Satisfied	35	25
Not satisfied	5	15

By Fischer Exact test p value is 0.00176 i.e. <0.01 hence significant.

Therefore the difference in level of satisfaction between the two groups was statistically significant.

DISCUSSION

Open haemorrhoidectomy was originally described by Milligan Morgan and associates. Skin covered component of each of the pile mass was seized with artery forces and retracted upwards which causes lower pole of piles to protrude out.^[5] Purple mucosa of each piles is then grasped with artery forceps, drawn outwards and downwards causing visualization of pink rectal mucosa of the upper pole. Piles are drawn to their maximum extent and a ligature is applied at upper pole.

After making a v-shaped incision in anal and perianal skin the lower end of internal sphincter is exposed in order to preserve it while the venous plexus is dissected from it. The isolated haemorrhoid is excised with scissor a few mm below the apical ligature. In Stapled haemorrhoidectomy (MIPH) circumferential mucosectomy is done. In this procedure, blood supply to the haemorrhoid is interrupted but the actual A-V malformations are left in-situ. This technique of stapling a haemorrhoid was standardized.

In 1993 Dr. Antonio Longo placed the staples approximately 4 cm cephaloid to dentate line.^[6] By means of a circular stapling gun, a low rectal mucosal resection and mucoso-mucosal anastomosis is done which removes redundant rectal mucosa above the haemorrhoid correcting the previous down ward

displacement of the anal cushion and interrupting the vessels in the submucosal plane. Since this procedure does not involve any surgery below dentate line, it is painless unlike open haemorrhoidectomy. It is quite rapid, technically easy and can be easily performed without any extra equipments. Results were independent of the experience of the surgeon.^[7]

This randomized prospective study is designed to determine whether stapled technique offers any definite advantage over open method. Table 1 shows no statistical significance in the mean age group between two groups. The study conducted by HetzEr et al,^[8] also resulted with no statistical difference. Table 2 shows condition of haemorrhoid was more common in males as compared to females. Hetzer,^[8] reported in his study male:female was 15:5 which is quite similar to our study. Table-6 shows third degree haemorrhoids are the commonest requiring surgical treatment i.e. 46 out of 60 (76.66%). Similar results were also obtained in other studies.^[9] Table 7 shows intra operative blood loss was significantly less in the stapled group as compared to open group. $p < 0.001$. There is a difference in operative time in two technique which is shown in [Table 8]. P-value is 0.001 and significant. The shorter time for stapled surgery was also obtained by study done by Ortiz H et al.^[10] The duration of hospital stay was significantly less in stapled haemorrhoidectomy group as compared to open haemorrhoidectomy group with p value < 0.01 shown in. Hospital stay was shorter in stapled group in the similar studies done by Shalaby et al,^[11] and Rowsell et al.^[12] The pain score compared between the two groups prove that post-operative pain is much less in stapled group with p value of 0.01. With regards to return to work there is a significant difference between the groups. p value < 0.01 shown in. This study shows that return to work is much earlier in case of stapled group. Urinary retention is the most common complication and patients with open haemorrhoidectomy shows more retention than stapled group in. Ganio et al,^[13] has reported similar results in his study. According to table 10, there is no recurrence, stenosis and fibrosis in stapled group and open group have some degree of fibrosis. As evaluation of patient, level of satisfaction is 93.33% in our study by stapled group against 53.33 in open group. This is very significant and shown in table 11. Mehigan et al,^[14] and Desoky et al,^[15] reported in their study that 85% patients were satisfied with stapled procedure which is quite similar to our study. Tjandra JJ and Chan MK published systematic review on Stapled Haemorrhoidectomy of all randomized, controlled trials until August 2006.^[13] Stapled Haemorrhoidectomy was associated with less operating time (Weighted mean difference, -11.35 minutes; $p = 0.006$). In our study, the mean difference was comparable (11 mins). Stolfi et al (2008) in a study involving one hundred and seventy

one patients comparing Stapled Haemorrhoidopexy and Milligan-Morgan technique, mean surgical time was 28 mins.^[14-18] The largest trial describing experience with 3,711 Stapled haemorrhoidopexies was published recently by Ng KH, et al (2006).^[19] The median duration of operation was 15 mins (Range 5 to 45 mins), much lower than most studies. In our study, post-operative pain was managed according to the guidelines of French Anesthesia Society. Pain was assessed using a Visual Analog Scale (VAS). Pain scores were significantly higher in the open group at 6 hours, 12 hours, 24 hours and at first defecation. Tjandra JJ et al report less pain after Stapled haemorrhoidopexy, as evidenced by lower pain scores at rest and on defecation and 37.6 percent reduction in analgesic requirement.

CONCLUSION

After comparison between Open Haemorrhoidectomy with MIPH, our study confirms that MIPH is associated with shorter duration of surgery, less postoperative pain with minimal post-operative complications as compared with Milligan-Morgan (Open) Haemorrhoidectomy. We conclude that MIPH is safe with many short-term benefits. It is a good technique and has emerged as an alternative to open Haemorrhoidectomy.

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