

One Year Comparative Prospective Study on MIPH Versus Milligan –Morgan open Haemorrhoidectomy in a Tertiary Care Hospital.

Rajesh Kumar Dora¹, Manoj Kumar Barik², Nitya Nutan Mishra²

¹Assistant Professor, Department of Surgery S.C.B.Medical College, Cuttack

²Junior Resident, Department of Surgery S.C.B.Medical College, Cuttack

Received: June 2019

Accepted: June 2019

Copyright: © the author(s), publisher. It is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Haemorrhoids are dilated veins which descend down to the anus present as pain during defaecation, bleeding and a protruding mass outside the anus. The aim of the study is to evaluate the effectiveness of open haemorrhoidectomy with minimal invasive procedure for haemorrhoids (MIPH). **Methods:** 60 cases were selected for this study .30 patients each were divided into two groups.Open surgery (Milligan-morgan haemorrhoidectomy) was done in one group and MIPH for 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, 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,^[3] described treatment which was very painful during pre-anaesthetic era and later use of monopolar cautery is mostly used for this procedure .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 (MMH) 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.

Aims and Objective

1. To compare stapled haemorrhoidopexy (MIPH) with Milligan Morgan open Haemorrhoidectomy (MMH).
2. To evaluate the advantages and disadvantages of MIPH

MATERIALS AND METHODS

This study was conducted in the Dept. of General Surgery, S.C.B Medical College and Hospital, Cuttack from June 2018 to May 2019 on patients attending to O.P.D or emergency Dept., irrespective of their gender and social status.

Name & Address of Corresponding Author

Dr. Rajesh Kumar Dora,
Assistant Professor,
Department of Surgery
S.C.B.Medical College,
Cuttack, Odisha.

60 patients were included in this study .30 patients underwent stapled haemorrhoidopexy and 30 patients were taken up for open haemorrhoidectomy. Advantages and disadvantages of both procedures was explained to 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 60 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 the O.T of S.C.B. Medical College and Hospital. Intra operative findings, haemodynamics and complications were noted in all patients. Inj. Tazobactam with piperacillin, Inj. Metronidazole and standard post-operative care was given.

RESULTS

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

Gr-A: Those who underwent MIPH (30 patients)

Gr -B: Those who underwent Milligan Morgan open procedure (30 patients)

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

Gr –A: MIPH

Gr-B: Milligan Morgan Open Haemorrhoidectomy

	Group A	Group B
Range (yr)	26-78	24-74
Mean (yr) S.D.	45.814.56	52.33

P value >0.2694 i.e. >0.05

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

Table 2: Sex Distribution Study

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

	Group A	Group B
Males	24	26
Females	6	4

Table 3: Presenting Features

Symptoms	N (N=60)	%
Bleeding	50	83.33
Prolapse	60	100
Constipation	44	73.33
Itching	6	10

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

Table 4: Duration of Symptoms

Symptoms	N (N=60)	%
<1 Month	4	6.66
1-12 Month	16	76.66
>12 Month	40	66.66

40 patients had symptoms more than 12 months period (66.66%).

Table 5: Associated Conditions

	N (N=60)	%
Anaemia (Hb<10 G%)	26	43.33
Hypertesion	2	3.33
Pulmonary TB	10	16.66
DM-II	2	3.33
Inguinal Hernia	4	6.66

Anaemia was commonly associated. Out of 60 patients, 20 patients were anaemic (43.33).

Table 6: Degree Of Haemorrhoids

Grading	N (%)
Grade II	12(20%)
Grade III	46(76.6%)
Grade IV	2(6.66%)

Out of 60 patients, 46 patients (76.6%) had grade-III haemorrhoids.

Table 7: Intraoperative Blood Loss

Group	Mean(ml)	Range(ml)
A	63.3	50-80 ml
B	148	80-100ml

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 procedure is highly insignificant.

Table 8: Operative Time

Group	Mean(min)	Range(min)
A	27.06	20-38
B	52	40-48

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	1.2	1-4
B	2.66	1-5

By Mann Whitney U test calculated p value is 0.000295 i.e. <<0.01

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

Table 10: Visual Analogue Score for Pain Assessment

	Group A	Group B
Day1	102	184
Day2	16	118
Day7	2	70
Day15	0	46

By Mann Whitney U test p value for consecutive day is

Day 1-----0.000197

Day2-----0.000005

Day3-----0.000005

Day15-----0.000203

So difference in pain between the two groups is highly significant even two weeks post operatively.

Table 11: Days to Return Work

Group	Mean(days)	Range(days)
A	3.6	2-7
B	9.22	7-15

By Mann Whitney U test p value is 0.000003, hence the difference between the days to return work in the two groups is highly significant.

Table 12: Complications

	Group A		Group B	
	N=30	%	N=30	%
Urinary retention	4	13.33	10	33.33
Haemorrhage	2	6.66	2	6.66
Incontinence	-	-	2	6.66
Increases defecation frequency	2	6.66	-	-
Anal discharge	-	-	-	-

Table 13: Long Term Sequale in Follow Up

Maximum follow up of 11 month

Mean follow up of 6.8 month

	Group A		Group B	
	N=30	%	N=30	%
Recurrent	-	-	-	-
Skin tag/fibrosis	-	-	6	20
Stenosis	-	-	-	-

Table 14: Level of Satisfaction –Patients Evaluation

	Group A	Group B
Satisfied	28(93.33%)	16(53.33%)
Not satisfied	2(6.77%)	14(42.77%)

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,^[5] 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. 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 haemorrhoidopexy (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 standardised.

In 1993 Dr. Antonio Longo,^[6] placed the staples approximately 4 cm cephaloid to dentate line. 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 downward 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 haemorrhoidopexy group as compared to open haemorrhoidectomy group with p value $< < 0.01$ shown in table-9. 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 [Table 10]. With regards to return to work there is a significant difference between the groups. p value < 0.01 shown in [Table 11]. 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 [Table 12]. Ganio. et. Al,^[13] has reported similar results in his study. According to [Table 13], 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 14]. Mehigan,^[14] et.al and Desoky,^[15] et.al, reported in their study that 85% patients were satisfied with stapled procedure which is quite similar to our study.

CONCLUSION

This study included patients of all age group and both sexes. The following conclusions have been drawn after getting statistical result.

1. This disease is commoner in males.
2. It has a bimodal age of distribution.
3. Among associated symptoms chronic anaemia was the commonest.
4. Intraoperative blood loss is significant in group A ($p < 0.01$)
5. Time taken in surgery in group A is very less ($p < 0.05$)
6. The duration of hospital stay in group A is shorter than group B ($p < 0.01$)
7. Stapled group experienced significantly less pain than open ($p < < 0.01$).
8. The post-operative complications in Group-A is less observed.
9. Return to work is earlier in group A ($p < 0.01$)
10. In a follow up of 11 months, there are no complications seen in stapled haemorrhoidectomy.
11. Stapled haemorrhoidopexy has a very good patient acceptance and satisfaction.

Economic gain due to early return to work is enormous and it overcomes the cost of the stapler used during surgery. So MIPH (stapled haemorrhoidopexy) is superior to Milligan Morgan technique (open haemorrhoidectomy) in terms of post-operative pain, operative time, return to normal activity and all other above parameters studied. Hence newer generation surgeons should prefer this technique over open surgery for better outcome.

REFERENCES

1. Sun Z, Migaly J. Review of Hemorrhoid Disease: Presentation and Management. Clin Colon Rectal Surg. 2016;29(1):22–29. doi:10.1055/s-0035-1568144
2. Ferguson JA. Diverse method of managing haemorrhoid-surgical treatment. Disease of Colon Rectum 1973; 16: 1730
3. Eastman PF and Applebaum IA. Critical evaluation of internal haemorrhoidal ligation as an outpatient procedure. Amer J Proctol 1969; 201-09.
4. Seow Chosen F. Stapled Haemorrhoidectomy: pain or gain Sr J Surg 2001;1-3
5. Miligan ETC. Haemorrhoids. Sr Med J 1939; 2:412.
6. Longo A. Treatment of Haemorrhoids disease by reduction of mucosa and Haemorrhoid prolapse with circular suturing device: A new procedure. Proceedings of the 6 th World congress of Endoscopic surgery 1998 pg. 777-784
7. Pernici LM, Bertalucci B et al. Early and late experience with circular stapler Haemorrhoidectomy. Dis Colon Rectum 2001; 44: 836-41.
8. Hetzer FH, Demartines N, Handshun AE et al. stapled vs excisional Haemorrhoidectomy: Long term results of a prospective randomised study. Arch surg 2002; 137: 337-40.
9. Pavlidis T, Souparis A et al. Longo procedure vs MMH: A randomised controlled trial. Int J Colorectal Dis 2002; 17: 50-3.
10. Ortiz H, Marzo J, Armenderiz p. RCT of stapled Haemorrhoidopexy vrs conventional Haemorrhoidectomy. Br J Surgery 2002; 89: 1376-81.
11. Shalabay R, Desoky A. A RCT of stapled group with MMH. Sr J Surgery 2001; 88: 1049-53.
12. Rowsell M, Bello M. stapled haemorrhoidectomy versus conventional haemorrhoidectomy: randomized control trial. Lancet 2000; 355: 782-5.
13. Ganio E et al. prospective randomized multicentre trial comparing stapled with open haemorrhoidectomy. Sr J Surg 2001; 88: 669-74.
14. Mehigan BJ, Monson JRT et al. Stapling procedure vs MMH: A Randomised controlled trial. Lancet 2000; 355: 782-5.
15. Desoky. M. Randomised clinical trial of stapled with MMH. Sr J Surg 2001; 88: 1049-53.

How to cite this article: Dora RK, Barik MK, Mishra NN. One Year Comparative Prospective Study on MIPH Versus Milligan –Morgan open Haemorrhoidectomy in a Tertiary Care Hospital. Ann. Int. Med. Den. Res. 2019; 5(4):SG33-SG36.

Source of Support: Nil, **Conflict of Interest:** None declared