

“A Comparison between Haemorrhoidectomy by Milligan-Morgan and Stapler Haemorrhoidopexy on Post-surgical (Short-term) Complications.”

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Abstract

Introduction: Haemorrhoidal disease is a common clinical problem in our surgical practice. This is a study of personal series of 200 patients both male and female who were diagnosed as patients of 3rd and 4th degree haemorrhoids and underwent operative treatment by MMH (Milligan-Morgan hemorrhoidectomy) and stapler haemorrhoidopexy. MMH first described in 1937 most popular among many technique use. Whereas a new surgical treatment named as PPH described by longo 1995 is associated with much faster recovery and less post-operative pain. Our study objective to compare the post-operative complications short term result and between these two methods.

Methods: It is a retrospective study of 200 patients of personal series of grade iii & iv haemorrhoids who underwent surgical treatment by MMH (Milligan-Morgan hemorrhoidectomy) in 100 patients and stapler haemorrhoidopexy in 100 patients from a time span of 2015-2017. Different post-operative complication as well as short term result were compared between these two groups of patients with a follow up time of 1 year.

Results: In our study in relation short term result for both the procedure demonstrate that postpartum hemorrhage (PPH) is associated with much less pain with $P (<0.05)$ shorter duration of stay in hospital with a P of (0.001) and much quicker return to usual activity or work with a P of (<0.001). In relation of early post-operative complications like acute retention, haemorrhage and late complication like anal stenosis no significant difference was found between the two procedures.

Conclusion: PPH is associated with much faster recovery with less post-operative pain and faster return to work than MMH. But in case of post-surgical complications no procedure is found to be superior to others.

Key words: MMH (Milligan-Morgan hemorrhoidectomy), Stapler Haemorrhoidopexy, Post-surgical Complications.

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I. Introduction

Haemorrhoidal disease is a common clinical problem in our day to day surgical practice. Our patients of personal treatment in the form of MMH and PPH all them with grade iii and grade iv haemorrhoids. There were well established open technique for haemorrhoid surgery among them MMH is the most commonly applied open procedure, which was introduced in 1937. There are well known disadvantages of this procedure in the form of marked postoperative pain; delayed wound healing leading to variable postoperative discomfort and long duration for returning to usual work activities.¹ To overcome these disadvantages PPH procedure was introduced in 1995 by Dr. Antonio Longo as an alternative to open haemorrhoidectomy. Numerous control study demonstrated the advantages of this procedure with less pain, fast recovery and quick return to work.² Haemorrhoidectomy for large (Grade iii and iv) symptomatic haemorrhoid is well recognized surgical treatment. Open operative like Milligan Morgan procedure has been well established as treatment of grade iii and iv haemorrhoids.³ Milligan Morgan wrote their classic paper on open haemorrhoidectomy excision and ligation procedure for haemorrhoid in 1937.⁴ This classic technique has been subjected to numerous modification with maintaining the basic underlying principle of presenting the mucocutaneous bridges to prevent stricture formation. But complication particularly post-operative pain according to many studies and time taken to return to work and normal activities have not been satisfactorily addressed. Internal sphincter spasm thought to play

important role in post-operative pain.⁵Post-operative pain after open haemorrhoidectomy is well known complication associated with long recovery time.⁶

II. Objective

The study objective was to assess the common post-operative complication and short term result following MMH & PPH procedure and compare them.

III. Materials and Methodology

This is a retrospective study of 200 patients of personal series of grade iii & iv haemorrhoids who are clinically diagnosed as haemorrhoids patients of grade iii & grade iv type and selected for haemorrhoidectomy by MMH (Milligan-Morgan hemorrhoidectomy) & PPH procedure. After taking detailed history clinical examination done including CBC RBS, S creatinine, CXR, ECG; Blood grouping and in some selected patient short colonoscopy. 100 patients underwent MMH & 100 patients underwent PPH. We give the patient adequate post-operative analgesia. Patients are kept nothing by mouth for 4-6 hours. Dressing changed on 1st POD morning and pain score assessed on VAS (visual analog scale). During the first POD pain score recorded [6, 12 & 24 hours] patients were discharged next day in case of PPH. In case of MMH patients were discharged after adequate pain control on 2nd POD. Patients were reviewed 1 week; 4 weeks, 10 weeks & 6 months, 1 year, 2 years postoperatively. At follow up patients underwent physical examination and asked regarding any residual symptoms of pain or any other complications like bleeding or post-operative loss of faecal continence or loss of control for flatus overall wellbeing and duration for returning to daily work activities are assessed. Significance assessed at 5% level of significance. Student T test for comparing study parameters.

Data categorization by chi square observed results calculated by SPSS 22 version.

Results		VAS
→ 10	Unable to Move	I am in bed, can't move due to my pain. I need someone to take me to emergency room to get help for my pain.
	Worst pain ever felt	
→ 9	Severe	My pain all that I think about I can barely talk or move because of the pain
→ 8	Intense	My pain is so severe that it's hard to think of anything else, talking and listening are difficult.
→ 7	Un manageable	I am in pain all the time it keeps me from doing most activities.
→ 6	Distressing	I think about my pain all of the time I give up many activities because of my pain.
→ 5	Distracting	I think about my pain most of the time I can't do some of the activities. I need to do each day because of the pain.
→ 4	Moderate	I am constantly aware of my pain but I can't continue most activities.
→ 3	Uncomfortable	My pain bothers me but I can ignore it most of the time.
→ 2	Mild	I have a low level of pain. I am aware of my pain only when I pay attention to it.
→ 1	Minimal	My pain is hardly noticeable
→ 0	No pain	I've no pain

IV. Result

Among 500 patients visited our clinic with various symptoms for haemorrhoidal disease and they underwent clinical examination include digital rectal examination and proctoscopy and finally 300 patients diagnosed with haemorrhoides in between them with grade iii & iv haemorrhoides, were 200 patients selected for MMH & PPH procedure 100 of them underwent MMH & 100 of them underwent PPH. In our personal series haemorrhoidal disease are more common among women 56% (140) & 44% (110) were male. In our series, most prevalent age group is 3rd decade, 100 patients (40%) followed by 4th decade 75 (34.4%) & 5th decade 40 (25.6%). No. of patients received surgical treatment in 3rd decade 85%; 4th decade 87.20% and in the 5th decade 62.5%. Methods of operative treatment offered in among 200 patients, 100 patients had MMH & 100 had PPH. Duration of surgery in different methods. In PPH duration of surgery ranges from 30-42 minutes with mean duration 35-76 minutes. In MMH average duration was 36-50 minutes with a mean duration 45-73 minutes. Duration of surgery is significantly low in stapled group with a P value of <0.001 which is highly significant. Eighty five percent (85%) patients with PPH discharged within 2 days, 15% patients discharged within 3 days. In open group this percentage is lower 55% discharged in 2 days with remaining patients discharged within 4 days. Mean duration of hospital stay is significantly lower in PPH group with a P value of <0.001. Sixty five (65%) patients with PPH return to work in 1 week and remaining patients within 2 weeks join work. With MMH 30% patients able to join work within 1 week and remaining patients join work within 3 weeks. Average 10.59 days in PPH group and 15.65 days in MMH group with significant early recovery in PPH with P value <.05. Post-operative pain is significantly higher in MMH group average 3.5 in 24 hours & 2.6 at 48 hours. In PPH group 2.54 in 24 hours 1.24 in 48 hours. Regarding post-surgical complications in different methods of haemorrhoidectomy, most common surgical complication immediately after surgery were acute

retention; Hemorrhage.Late complications are Local sepsis; Anal stenosis.In one year follow up period, recurrence occur in 3 patients with MMH and 2 patients with PPH.No significant difference is noted in between two groups.Among late post-operative complication most common is Anal stenosis which is observed within 1 year post-operative follow up.In 6% case of MMH and No patients with PPH. Among 200 cases post-operative complication develop in 27 patients (13.5%). Among 200 patients 27 patients develop surgical complication between them 18 patients are female and 9 are male patients.Acute retention in 5 female patients and 3 male patients. Post-operative hemorrhage in 2 male patients and in 6 female patients. Local sepsis developed in 2 female patients and 3 male patients.Late post-operative complications; Anal stenosis developed in 5 female patients and 1 male patient.Among 200 patients 27 patients developed post-operative complication. 11 patients were in 3rd decade of life. Among them 2 patients had acute retention: 3 patients had haemorrhage and anal stenosis in one patient.In 4th decade of life 11 patients had post-operative complication. 2 with acute retention; 3 patients with haemorrhage; 3 patients with local sepsis and 4 patients with anal stenosis.In 5th decade 9 patients had complication 4 had acute retention; 2 had haemorrhage 2 developed local sepsis and 1 patient had anal stenosis.Post-operative haemorrhage among and patient of post-operative 6 patients had refractory bleeding all of them required surgical restoring of bleeding vessels.2 patients developed secondary bleeding managed conservatively.Post-operative anal stenosis developed in 6 patients within a follow up period of 6-9 months.

Table I: Background characteristics of the study participants. (n=250)

	No. of patient with HD	%	No. of patient had operative treatment	%
Gender				
Female	140	56%	100	71.4%
Male	110	44%	100	91%
Age Group				
11-20	0	0%	0	0
21-30	100	40%	85	85%
31-40	86	34.4%	75	87.2%
41-50	64	25.6%	40	62.5%

Table II: Surgical Technique applied for the study. (n=200)

Surgical technique	n	%
Open (MMH) Milligan Morgan	100	50%
PPH	100	50%

Table III: Distribution of disease grades among the participants. (n=200)

MMH		PPH	
%	Grade	%	Grade
56%	iii	43%	iii
44%	iv	57%	iv

Table IV: Distribution of the gender among the participants having MMH & PPH. (n=200)

MMH		PPH	
Gender	%	Gender	%
Female	46%	Female	57%
Male	54%	Male	54%

Table V: Distribution of the duration in procedures

	PPH	MMH
Pulse Duration	30-42 Minutes	36-50 Minutes
Mean Duration	35-76 Minutes	45-73 Minutes
Mean Duration	1.54 days	3.41 days

Table VI: Distribution of Time taken to return into work and pain score in the procedures

		PPH	MMH
Time takes to return to work	1 week	62%	33%
	2 weeks	38%	27%
	3 weeks		40%
Pain score in (VAS)	24 hours	2.54	3.5
	48 hours	1.24	2.6

Table VII: Distribution of Post-operative complications in the procedures. (n=200)

	MMH	PPH
Immediate complication		
Hemorrhage	4(4%)	2 (2%)
Acute retention	7 (7%)	6 (6%)
Late complication		
Local sepsis	3 (3%)	2 (2%)
Anal stenosis	3 (3%)	0
Post-operative recurrence		
	4 patients (4%)	6 (6%)

Table VIII: Post-operative complication in relation to gender.(n=200)

Operative treatment given	Woman 112 (56%)	Man 88 (44%)
No. of patients complications	18	09
Acute retention	5	3
Post-operative hemorrhage	6	2
Local sepsis	2	3
Anal stenosis	5	1

Table IX:Management given to the patients with post-operative complication.

	MMH	PPH	
No of patients with post-operative bleeding	4	2	Resuturing of bleeding vessel (4 case)
			Conservative treatment (2 case)
Post-operative Anal Stenosis			
Mild without anal fissure	4	0	Conservative
Moderate with anal fissure	2	0	Single anotomy with excision of fibrotic are with lateral internal sphinterotomy.
Post-surgery Recurrence			
Within a follow up period of 1 year	3	2	

Table X: Overall Scenarios of the study.(n=200)

	Age Group	Operative treatment given	Complication	Acute retention	Age	Local sepsis	Anal stenosis
3 rd Decade	21-30	85 (42.5%)	06	2	3	0	1
4 th Decade	31-40	75 (37.5)	11	2	3	3	4
5 th Decade	41-50	40 (20%)	9	4	2	2	1
6 th Decade	51-60	0	0	0	0	0	0

No significant differences

V. Discussion

In our study we found short term benefit for PPH procedure over Miligan Morgan heamorrhoidectomy. In relation to duration of surgery, our study showed that it is significantly low in PPH group which observation correlate with other studies. One multicenter study reported that 23.4% patients had at count one adverse effect following PPH.⁷Dis colon Rectum 47: 1824: 1836 another systemic review found that 20-2% of PPH patient had post-operative complication.^{8,9,10}Recent meta-analysisrevealed thathaemorrhoidopexy with conventional surgery found higher rate of recurrence in PPH patients.^{11,12}Potential benefit of PPH include shorter operating time, less post-operative pain, less urinary retention and more rapid return to normal activities. Despite these short term advantages, long term results are in sufficient particularly regarding recurrence prolapse and residual skin tag.¹³A systemic review published of all randomized controlled trials until august 2006, PPH was associated with less operating time (P=0.006) and less pain after operation.¹⁴Stolfi et al reported post-operative pain on first two post-operative days was similar.¹⁵In a study by France et al patients returned work at an average of 6.7 days (range 8-14 days) in stapled group and 20.7 days (range 7-45) in open group; stapled haemorrhoidopexy allowed faster functional with slower time off work.¹⁶The most recent series analyzing the largest number of patients having Milligan Morgan haemorrhoidectomy is a series with 2417 procedures performed by Milligan Morgan founds 55 anal complication (2.7) 38 case (1.9%) of anal stenosis 9 cases (.4%) of bleeding and other complication (.4%) (CKUZ GNG, Santana JL, Santana SKAA, Faria MNZ). In our series,Most common surgical complication immediately after surgery acute retention; Hemorrhage.Late complications are Local sepsis; Anal stenosis.In 1 year follow up period recurrence in 3 patients with MMH and 2 patients with PPH.No significant difference noted in between.Among late post-operative complication most common is Anal stenosis which is observed within 1 year post-operative follow up.In 6 cases of MMH and no patient with PPH. Among 200 cases post-operative complication develop in 27 patients (13.5%). Among 200 patients 27 patients develop surgical complication among them 18 patients are female and 9 are male patients. Acute retention in 5 female

patients and 3 male patients post-operative hemorrhage in 2 male patients. Local sepsis developed in 2 female patients and 3 male patients. Late post-operative complication Anal stenosis developed in 5 female patients and 1 male patient. Among 200 patients 27 patients developed post-operative complication. 11 patients were in 3rd decade of life. Among them 2 patients had acute retention; 3 patients had haemorrhage and anal stenosis in one patient. In 4th decade of life 11 patients had post-operative complication. 2 with acute retention; 3 patients with haemorrhage; 3 patients with local sepsis and 4 patients with anal stenosis. In 5th decade 9 patients had complication 4 had acute retention; 2 had haemorrhage 2 developed local sepsis and 1 patient had anal stenosis. Post-operative haemorrhage occur in 6 patients. Four patients needed surgical ligation of bleeding vessels. 2 patients developed secondary bleeding managed conservatively. Post-operative anal stenosis developed in 6 patients within a follow up period of one year.

VI. Conclusion

In our study haemorrhoidectomy was performed in more female patients than male patients and most commonly in 4th decade of life. The most common post-operative complications are post-operative haemorrhage acute urinary retention, post-operative anal stenosis with no statistically significant difference between two groups of patients. The finding of our study supported the view that stapled haemorrhoidopexy is associated with less post-operative pain, shorter duration for hospital stay, more early recovery and return to work in relation to Milligan Morgan haemorrhoidectomy. There is no residual prolapse, faecal incontinence in any of our patients in 1 year follow up period. So in conclusion can be said that short term benefit of PPH is better and consequences of both procedure are not significantly different in our series of patients.

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