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A Comparative Study Between Milligan-Morgan Haemorrhoidectomy and Stapler Haemorrhoidectomy

¹Sanjay Chatterjee and ²*Rituraj

¹Assistant Professor, ²Resident, Department of General Surgery

NIMS Medical College & Hospital, Jaipur, India

*Corresponding author: Rituraj

Abstract

Milligan – Morgan haemorrhoidectomy has remained most popular surgical treatment for late grade II, III and IV haemorrhoids, but has a reputation for being a painful procedure for fairly benign disease. With the advent of minimal invasive surgery, the scenario has changed. Stapler haemorrhoidectomy for haemorrhoids has the benefits of decreased postoperative pain, bleeding, anal discharge, reduced hospital stay, earlier return to routine work. The present study was conducted in NIMS Medical College & Hospital, Jaipur. Seventy patients (35 in each group) with different degrees (II, III, and IV) of symptomatic haemorrhoids underwent haemorrhoidectomy by either conventional Milligan – Morgan (Group M) or Stapler haemorrhoidectomy (Group S). The results were compared with regards to time taken for the procedure, post-operative complications, hospital stay and time to return normal activity. Statistical analysis was done using SPSS ver. 20 and p-value <0.05 was considered as significant. It was found that time required for Stapler hemorrhoidectomy was 22.4 mins which was almost half of that required for Conventional hemorrhoidectomy (39.8 mins; p< 0.05). Mean Hospital stay after Milligan-Morgan haemorrhoidectomy was 4.97 days and after Stapler haemorrhoidectomy was 3 days (p< 0.05). Mean time to return routine activities after Milligan-Morgan haemorrhoidectomy was 14.42 days while after Stapler haemorrhoidectomy was 4.37 days (p< 0.05). Postoperative pain score (VAS) at day 1, 7 and 15 was significantly more in Milligan-Morgan Haemorrhoidectomy group as compared to Stapler haemorrhoidectomy group (p< 0.05; Table 3). Postoperative Complications like bleeding, anal discharge, fissure in-aano and urinary retention was seen in significantly more number of patients after Milligan-Morgan haemorrhoidectomy than Satpler haemorrhoidectomy (p< 0.05). It may be concluded that stapler haemorrhoidectomy offers a promising treatment for the treatment of haemorrhoids however long-term follow up, rate of recurrence and cost effectiveness needs further evaluation.

Keywords: Haemorrhoids, Milligan-Morgan Haemorrhoidectomy Stapler Haemorrhoidectomy

Introduction

Haemorrhoids are one of the commonest ailments that afflict mankind, and their treatment has been subject of consideration in medical literature since Egyptian papyruses earlier than 3000 BC. Hippocrates in 400 BC mentioned burning, strangling and excision.¹ The word ‘**haemorrhoid**’ is derived from the Greek adjective haemorrhoids, meaning bleeding which is most prominent symptom. The word ‘**piles**’ is derived from the Latin word pila-meaning a ball which refers to a swelling around the anus. These terms are often used synonymously. Many alternative treatment methods have been developed for haemorrhoids. Milligan – Morgan haemorrhoidectomy as described in 1937 has remain most popular surgical treatment for late grade II, III and IV haemorrhoids, but has a reputation for being a painful procedure for fairly benign disease.² With the advent of minimal invasive surgery, the scenario has changed. More recently, Dr. Antonio Longo (1998) has advocated circular stapler haemorrhoidectomy for haemorrhoids.³ Theoretical benefits of this approach include decreased postoperative pain, bleeding, anal discharge, reduced hospital stay, earlier return to routine work. Although it

showed early promising results, expensive instrument, specialized training and a long learning curve limits the use of stapler haemorrhoidectomy. This has led to lot of soul – searching and numerous attempts at comparing the merits and demerits of Milligan – Morgan vis-a-vis stapler haemorrhoidectomy in treatment of late grade II, III and IV haemorrhoids. The present study is designed to compare Stapler haemorrhoidectomy with Milligan–Morgan haemorrhoidectomy with regards to time taken for the procedure, post-operative complications, hospital stay and time to return normal activity.

Materials and Methods

The present study was conducted in NIMS Medical College & Hospital, Jaipur. Seventy patients (35 in each group) with different degrees (II, III, and IV) of symptomatic haemorrhoids underwent haemorrhoidectomy by either conventional Milligan – Morgan (Group M) or Stapler haemorrhoidectomy (Group S). Both the procedures were explained to the patient and his/her relatives, the type of procedure was selected by patient himself/herself after full understanding of both procedures. Permission for the study was taken from dept. of surgery, hospital administration and Ethical committee. Treatment plan which was followed included initial assessment of patient, selection of patient, post- treatment evaluation and follow ups on day 7, 15, 30, 45 and 60. Initial assessment of patient was carried out on standard proforma to reach up to diagnosis, assessment regarding fitness for anesthesia, association of systemic disease or of local anal pathology.

Inclusion Criteria

1. Primary Internal Haemorrhoids grade II, III & IV.

Exclusion Criteria

- 1) Primary Internal Haemorrhoids grade I. 2) Haemorrhoids due to: a) Portal Hypertension b) Pregnancy c) Ca-Rectum d) Neurological Incontinence. 3) Fistula in ano and 4) Haemorrhoids causing Obstructed Defaecation Syndrome (ODS).

Post- Operative Evaluation

- Pain – visual analogue Pain scale score: Day –1 8th hourly and mean score of three readings and at each follow up.
- Bleeding – minimal soakage / moderate quantified by number of pads soaked
- Anal discharge
- Infection- fever/pus discharge/ local signs of inflammation
- Postoperative fissure in-ano
- Hospital stay: calculated from day of surgery to discharge.
- Time to return to normal activity / Routine work

Statistical analysis was done using SPSS ver. 20 and p-value <0.05 was considered as significant. Values used for analysis were mean, median, percentage. Test of significance used were Students' test, Chi-square test and Mann-Whitney test.

Results

Mean age of patients of Group M was 44.25 years and of Group S was 46.6 years (p- 0.56). In group M, 6 patients (17.14%) were females and in Stapler group, 9 patients (25.71%) were females (p-0.38). Table 1 shows the clinical symptoms in patients at the time of presentation in both groups. Most common symptom in both groups was bleeding followed by prolapsed, pain and discharge (p> 0.05). Time required for Stapler hemorrhoidectomy was 22.4 mins which was almost half of that required for Conventional hemorrhoidectomy

(39.8 mins; $p < 0.05$). Mean Hospital stay after Milligan-Morgan haemorrhoidectomy was 4.97 days and after Stapler haemorrhoidectomy was 3 days ($p < 0.05$). Mean time to return routine activities after Milligan-Morgan haemorrhoidectomy was 14.42 days while after Stapler haemorrhoidectomy was 4.37 days ($p < 0.05$) (Table 2). Postoperative pain score (VAS) at day 1, 7 and 15 was significantly more in Milligan-Morgan Haemorrhoidectomy group as compared to Stapler haemorrhoidectomy group ($p < 0.05$; Table 3). Postoperative Complications like bleeding, anal discharge, fissure in-aano and urinary retention was seen in significantly more number of patients after Milligan-Morgan haemorrhoidectomy than Satpler haemorrhoidectomy ($p < 0.05$; Table 4).

Discussion

In the present study, all the patients having symptomatic grade II, III and IV haemorrhoids were included. Patients with grade I piles, thrombosed piles, associated anal fistula and those causing obstructed defaecation syndrome were excluded from the study. Mean age of patients of Group M was 44.25 years and of Group S was 46.6 years ($p = 0.56$) with male pre-dominance in both groups. Though equal sex distribution has been reported by many authors, our study showed M:F ratio in Group M was 4.8:1 and in Group S was 2.8:1. This sex distribution of present study is compared favorably with other published Indian study of Bikhchandani J. et al.⁴ Most common symptom observed in both groups was bleeding followed by prolapsed, pain and discharge. The presenting complaints were similar as reported by Henry et al. Stewart et al. and Barkitt et al.⁵⁻⁷ Mean Hospital stay after Milligan-Morgan haemorrhoidectomy was 4.97 days and after Stapler haemorrhoidectomy was 3.0 days ($p < 0.05$). Similar results were observed by Bikhchandani et al.⁴ (2.76 vs 1.24 days; $p < 0.05$) and Shalaby et al.⁸ (2.2 vs 1.1 days; $p < 0.01$). Postoperative pain score (VAS) at day 1, 7 and 15 was significantly more in Milligan-Morgan Haemorrhoidectomy group as compared to Stapler haemorrhoidectomy group ($p < 0.05$). The mean VAS score (post-op day 1) after Morgan Haemorrhoidectomy and Stapler haemorrhoidectomy in a study by Palimento D et al.⁹ was 5.0 and 3.0 ($p < 0.05$). Similarly mean scores in studies by Shalaby et al.⁸ and Mehigan et al.¹⁰ was 6.5 vs 2.1 and 7.6 vs 2.5 respectively ($p < 0.05$). In present study mean time to return routine activities after Milligan-Morgan haemorrhoidectomy was 14.42 days while after Stapler haemorrhoidectomy was 4.37 days ($p < 0.05$). Mean time for return to normal activity observed by Bikhchandani et al.⁴ was 17.6 and 8.12 days while that observed by Shalaby et al.⁸ was 23.4 and 8.2 days respectively ($p < 0.05$). Postoperative Complications like bleeding, anal discharge, fissure in-aano and urinary retention was seen in significantly more number of patients after Milligan-Morgan haemorrhoidectomy than Satpler haemorrhoidectomy. Our results were in accordance with similar observations made by other authors^{4,8-10}.

Conclusion

We thus conclude that stapler haemorrhoidectomy offers a promising treatment for the treatment of haemorrhoids however long-term follow up, rate of recurrence and cost effectiveness needs further evaluation.

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TABLES

Table 1. Comparison of Clinical Presentation in both groups

Group	Bleeding	Prolaps	Pain	Discharge	Pruritis
M	35	17	6	2	5
S	33	18	8	1	1
p-value	0.151	0.811	0.55	0.555	0.088

Table 2. Comparison of Time of Surgery, Hospital Stay and Time to return to normal Activity in both groups

Variables	Group	Mean	Std Dev	p-value
Time of Surgery (mins.)	M	40.14	6.24	0.041
	S	22.42	2.53	
Hospital Stay (days)	M	4.68	5.19	0.046
	S	3.0	1.21	
Time to return to normal Activity (days)	M	14.77	8.49	0.039
	S	4.4	1.68	

Table 3. Comparison of Post-operative pain in both groups

Pain Score (VAS)	Group	Mean	Median	p-value
Day 1	M	7.08	7	< 0.01
	S	2.80	3	
Day 7	M	2.92	3	< 0.01
	S	0.14	0	
Day 15	M	0.97	1	< 0.01
	S	0.00	0	

Table 4. Comparison of post-operative complications in both groups

Group	Bleeding	Anal Discharge	Fissure in-ano	Urinary Retention
M	20	6	7	5
S	0	0	0	0
p-value	< 0.01	< 0.01	< 0.01	< 0.01