ORIGINAL ARTICLE

Comparison of Stapled Versus Closed Haemorrhoidectomy in 3rd and 4th Degree Haemorrhoids

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ABSTRACT

Aim: To compare the results of closed versus stapled haemorrhoidectomy procedures.
Methodology: This is a quasi experimental study and 100 patients were included, 50 patients in each group. This study was done in General Surgery from 01-02-2018 to 30-12-2018 at M. Islam Teaching Hospital, Gujranwala. Age range of patients was 20-70 years.
Results: A total of 100 patients, 50 in group A and 50 in group B. Most patients were male as compare to female patients. The mean age was 39.25±5.27 years in group A and 41.36±4.35 in group B, age range from 20-70 years. The mean hospital stay was 2 and 3 days respectively. Mean operative time was 25.0 minutes and 42.0 minutes respectively (P <0.05). Fifty nine percent and 65% was bleeding per rectum respectively. Pain was 6% in and 16% respectively (p <0.05).
Conclusion: It is presumed that stapled haemorrhoidectomy contrasted with closed haemorrhoidectomy offers less postoperative pain, short hospital stay and early come back to work.
Keywords: Haemorrhoids, Closed haemorrhoidectomy, Stapled Haemorrhoidectomy.

INTRODUCTION

The term haemorrhoids means different things to different people and many patients were use these words to describe a wide variety of anorectal conditions[1]. The outcomes from disruption of the suspensory ligaments permitting downward prolapse of the cushions into and beyond the anal canal during defaecation[3]. First degree, second degree, third degree haemorrhoids and fourth degree haemorrhoids remain permanently prolapsed[4].

Stapled haemorrhoidectomy picked up prevalence for the treatment of 3rd and 4th degree haemorrhoids to a great extent because of decreased postoperative pain, less hospital stay and early come back to routine work. In stapled haemorrhoidectomy patients acceptance and satisfaction are higher. A few studies have revealed a high recurrence rate when performed for 4th degree haemorrhoids and during expectation to learn and adapt[5].

Bleeding is controlled utilizing diathermy and the wound is closed with a persistent suture. Stapled haemorrhoidectomy has picked up popularity for the treatment of 3rd and 4th degree haemorrhoids because of decreased postoperative pain, less hospital stay and early come back to routine work as compare the close haemorrhoidectomy[6].

MATERIALS AND METHODS

This is a quasi experimental study, 100 patients were included, 50 patients in each group from 01-01-2018 to 30-12-2018 in General Surgery. In both genders, internal haemorrhoids of 3rd and 4th degree with ASA grade I, II, III were included. Total 100 patients were operated under spinal or general anaesthesia. In group A stapled haemorrhoidectomy was done, this system utilized an intra-luminal round stapling firearm to extract a circumferential ring of mucosa from the upper anal canal. The technique involved placing a purse string suture about 3-4cm above the dentate line and stapling gun introduced into the anus. The suture fixed onto the pole of stapler, the weapon at that point fixed down and shot, discharging a twofold column of titanium staples through the tissue. Closed haemorrhoidectomy was performed in group B and each haemorrhoid was dissected off the internal sphincter and the vascular pedicle was transfixed and ligated and the wound was closed with the same continuous suture. The postoperative complications like pain, bleeding, urinary retention, incontinence, and anal stenosis were recorded. The postoperative pain was assessed according to visual analogue score (VAS) from 1 to 10 (1-2 mild pain, 3-6 moderate pain, 7-10 severe pain) on the operative day. Most patients were discharged when parental analgesia was no more required. The follow up of the patients was done at 1st week, 2nd week, 4th week, 2nd month and 4th month after the surgery.

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RESULTS

The mean age was 39.25±5.27 and 41.36±4.35 years respectively (Table 1). A major portion of male patients were in both groups, 31 (62%) male in group A while 32 (63%) were group B (Table 2).

The main indications were bleeding per rectum i.e. 59% and 65% respectively, perianal discharge was 16% and 18%, pain was 18% and 16%, respectively, itching was 14% in both groups and prolapsed haemorrhoids with 3rd degree were 28% and 30% respectively, and 4th degree prolapsed haemorrhoids were 32% and 28% respectively (Table 3).

The mean duration of hospital stay was 2.08±0.4 days and 3.0±0.6 days respectively (P <0.05). The mean operative time was 25.14±4.71 minutes and 42.12±5.13 minutes (p <0.05) respectively. Mean return to work was

6.11±4.31 days and 15.14±3.75 days respectively (P <0.05) (Table 4). Comparison of complications occurred in both groups, pain 3(6%) and 8 (16%) respectively. In 2 (4%) patients was urine retention, bleeding in 4(8%) patients in group A while 8(16%) patients in group B (Table 5).

After surgery pain was essentially lower in group A having VAS of 7 on the operative day in 6 patients requiring just tab. panadol for pain. Severe pain had in 9 patients with VAS of 7 on the operative day in group B and they required narcotic analgesia for two days and were discharged on 3rd post operative day. Overall 14 patients (28%) had pain in group A and 22(44%) patients had pain in group B in operative day, first day, second day and third day respectively (Table 6).

Table 1: Age distribution of patients (n=100)

Age (years)	Group A (n=50)		Group B (n=50)		P Value
	No.	%	No.	%	
20-40	15	30.0	13	26.0	0.554
41-60	25	50.0	26	52.0	
>60	10	20.0	11	22.0	
Mean±SD	39.35±5.27		41.36±4.35		

Table 2: Sex distribution of patients (n=100)

Sex	Group A		Group		P Value
	No.	%	No.	%	
Male	31	62.0	32	64.0	0.554
Female	19	38.0	18	36.0	

Table 3: Preoperative presentations of patients (n=100)

Variables	Group A	Group B
3rd degree	14(28%)	15(30%)
4th degree	16(32%)	14(28%)
Peri anal discharge	8(16%)	9(18%)
Pain	9(18%)	8(16%)
Itching	3(6%)	4(8%)

Table 4: Variables comparison of group A & B (n=100)

Variables	Group A Mean±SD	Group B Mean±SD	P value
Age (Years)	39.25±4.19	40.25±4.25	0.51
Hospital stay (Days)	2.08±0.4	3.0±0.6	0.00
Operative time (Minutes)	25.14±4.71	42.12±5.13	0.00
Return to work (Days)	6.11±4.31	15.14±3.75	0.00

Table 5: Complications comparison between group A & B (n=100)

Variables	Group A	Group B	P value
Pain	3(6%)	8(16%)	0.001
Bleeding	4(8%)	5(10%)	0.700
Retention of urine	2(4%)	3(6%)	1.00

Table 6: Postoperative pain by VAS in patients of group A & B (n=100)

Day	Group A	Group B
Operative day	6 (12%) (7-10)	9 (18%) (7-10)
First day	4 (8%) (3-6)	5 (12%) (3-6)
Second day	2 (4%) (3-6)	5 (10%) (3-6)
Third day	1 (2%) (1-2)	1 (2%) (1-2)

DISCUSSION

In our study mean age was 39.35±5.27 years in group A and 41.36±4.35 in group B. A similar study reported by Gravie et al[7], 51 years and 44 years respectively which is slightly high as compared to our study. A same study reported by Sobrado[8] the mean age was 40.6 years.

In group A mean hospital stay was 2.08±0.4 days and 3.0±0.6 days in group B. A same study was reported by Roswell[9] hospital stay was 1.1 days. Krska reported hospital stay of 3.5 days in stapled haemorrhoidectomy and 6.2 days in closed haemorrhoidectomy[10].

In our study mean operative time was 25.14±4.71 minutes in group A and in group B was 42.12±5.13 minutes. A study done by Pavlidis et al[11] time of operation was 23 minutes and was 43 minutes respectively.[10] Return to work is another parameter by which outcome can be assessed though it depends upon the patient's psyche if self-employed or not, paid or unpaid, medical leave and home conditions to support. Obviously the patients with earlier healing will resume their job earlier. In our study mean duration of return to work was 6.11±4.31 days in group A and 15.14±3.75 days in group B which is comparable with the studies of Roswell et al[9] and Racalbuto et al[12]. The study of Roswell et al[9] showed return to work of 8 days in stapled haemorrhoidectomy and 17 days in closed haemorrhoidectomy, comparatively the investigation of Racalbuto et al 12 demonstrators come back to work of 8 days in stapled haemorrhoidectomy and 16.9 days in closed haemorrhoidectomy which is equivalent with our study[13,14].

In our study postoperative complications in group B showed severe pain in 9 (18%) patients with VAS of 7-10. Liesel et al[15] the maximum pain by VAS was 3 and the maximum pain reported by Lau et al[16] by VAS was 4.7 which is less as compared to our study. However the study of Cheetham et al[17] reported maximum pain according to VAS was 9 which is more as compared to our study. They required analgesia for 2 days and discharged from hospital on 3rd day after surgery when no injectable analgesia was required[18].

In our study the retention of urine occurred in 2 patients (4%) in group A and 3 patients (6%) in group B, they were catheterized for 24 hours and were discharged satisfactorily. Bleeding from the anastomotic site occurred in 4 patients (8%) in group A and they were managed by under running bleeding point with vicryl 2/0 round body Qureshi et al.[19] A similar study of Correa-Rovelo et al[20] bleeding occurred in 2.4% patients in stapled haemorrhoidectomy group which is less as compared to our study[20].

CONCLUSION

It is concluded that stapled haemorrhoidectomy as compare to closed haemorrhoidectomy offers less post operative pain, shorter hospital stay, less operative time and earlier return to work.

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