ORIGINAL ARTICLE

Conventional Hemorrhoidectomy Versus Stapled Hemorrhoidopexy: Compare the Outcomes of both Techniques in Patients With Grade III and IV Hemorrhoids

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ABSTRACT

Aim: To examine the outcomes of stapled hemorrhoidopexy and compare with conventional open hemorrhoidectomy in patients presented with grade III and IV hemorrhoids.
Study design: Randomized controlled trial
Place and duration: Department of surgery, Divisional Headquarter Teaching Hospital Mirpur AJK/CMH Rawalakot during from 31-05-2018 to 31-05-2019.
Methods: Total 244 patients of both genders with ages 20 to 65 years presented with grade III and IV hemorrhoidal disease. All the patients were equally divided into two groups. Group I consist of 122 patients and received conventional hemorrhoidectomy, group II with same number of patients received stapled hemorrhoidopexy. Outcomes such as bleeding, postoperative pain by (VAS), hospital stay, return to normal activities and recurrence. Primary outcome was recurrence of hemorrhoids and examined at 6, 12 and 18 months postoperatively. Data was analyzed by SPSS 24.0.P-value <0.05 was taken as statistically significant.
Results: There were 102 (83.61%) males and 20(16.39%) females in group I and in group II 105 (86.07%) were males and 17(13.93%) were females. No significant difference regarding age and body mass index was observed between both groups (p-value >0.05). Shorter hospital stay, less bleeding and less post-operative pain and shorter duration of surgery is associated with stapled hemorrhoidopexy with p-value <0.05. Recurrence rate was high in patients with stapled hemorrhoidopexy group as compared to conventional hemorrhoidectomy at final follow-up (p-value <0.001).
Conclusion: Stapled hemorrhoidopexy is safe and effective with less complications as compared to conventional hemorrhoidectomy. However, high recurrence is associated with stapled hemorrhoidopexy.
Keywords: Hemorrhoids, Stapled Hemorrhoidopexy, Conventional Hemorrhoidectomy, Hospital stay,

INTRODUCTION

Hemorrhoidal illness is an extremely regular anorectal issue, happening in around 5% of everybody, and more often in people who are more established than 40 years.[1,2] Careful treatment is required in cases having symptomatic Grade III and Grade IV hemorrhoids. Also, medical procedure might be required when clinical treatment comes up short or within the sight of accompanying conditions, for example, butt-centric crevices or ulcers. There are different systems utilized in the careful treatment of hemorrhoidal ailment. Ordinary strategies incorporate Fergusons shut hemorrhoidectomy and Milligan–Morgans open hemorrhoidectomy, which can be performed with surgical blade or electrocautery.[3] Also, an assortment of gadgets and techniques have been acquainted with assistance encourage the system and limit persistent inconvenience in the postoperative period.

Traditionally third and forward level of hemorrhoids are overseen by hemorrhoidectomy, a surgery where the prolapsing some portion of the hemorrhoid is expelled and ligated at its base. Two decades sooner, this technique was viewed as highest quality level for the treatment of hemorrhoidal maladies.[4] This method has been related with serious post usable torment, dying, urinary maintenance and repeat.[5] So more up to date procedures have developed which incorporate stapled hemorrhoidopexy and hemorrhoidal conduit ligation. They have the proposed favorable position of lesser inconveniences with better outcomes[6,7].

Stapled hemorrhoidopexy is a technique where butt-centric pads are not evacuated rather a ring of mucosa in the terminal piece of the rectum is extracted bringing about lifting back of hemorrhoidal pads into their anatomical positions. The ultimate result will be diminished tightening of the hemorrhoids by the sphincter system during poo and decrease in blood stream into the pads.[8] Stapled hemorrhoidopexy, by extracting mucosal ring over the dentate line and fixing the inward rectal prolapse, should accomplish not just less post-usable torment, better practical recuperation with faster come back to ordinary exercises and improved patient fulfillment when contrasted with customary hemorrhoidectomy[9,10]. The present study was conducted to examine the outcomes of stapled hemorrhoidopexy and compare with conventional open hemorrhoidectomy.

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MATERIALS AND METHODS

This randomized controlled trial was conducted at Department of surgery, Divisional Headquarter Teaching Hospital Mirpur AJK/CMH Rawalakot during from 31-05-2018 to 31-05-2019. Total 244 patient of both genders presented with grade III and IV hemorrhoidal disease were enrolled in this study. Patients ages were ranging 20 to 65 years. Patients were randomly divided into two groups. Group I contains 122 patients and received conventional hemorrhoidectomy, group II with same number of patients received stapled hemorrhoidopexy. Detailed demographics including age, sex and body mass index (BMI) were recorded after taking informed written consent. Patients with recurrent hemorrhoids, rectal carcinoma, ulcerative patients, patients with thrombosis of hemorrhoids and those with no consent were excluded from this study. All the procedures were done by the experienced surgeon under general anaesthesia.

Preoperatively complete blood profile, medical examination was done. In group I conventional open procedure was done and in group II stapled hemorrhoidopexy was done. Time duration of surgery was recorded. Postoperative outcomes such as postoperative pain by VAS, bleeding, length of hospital stay and return to routine activity were examined. Primary outcome was recurrence of hemorrhoids and examined at 6, 12 and at 18 months postoperatively. Patients were strictly advised for the compliance of follow-up. Patients contact details were collected with the purpose to follow-up. All the data was analyzed by SPSS 24. Chi-square test was done to compare the outcomes between both groups. P-value <0.05 was taken as significant.

RESULTS

In group I 102 (83.61%) patients were males and 20 (16.39%) were females while in group II 105 (86.07%) were males and 17 (13.93%) were females. Mean age of patients in group I and II was 42.4±11.58 years and 41.2±10.86 years. In group I mean BMI was 23.14±3.51kg/m^2 and in group II it was 24.02±2.8 kg/m^2. No significant difference was observed regarding age, sex and BMI between both groups with p-value >0.05. In group I 90 (73.77%) and 32 (26.23%) patients had grade III and IV hemorrhoidal disease, in group II 86 (70.49%) and 36 (29.51%) had grade III and IV hemorrhoidal disease (Table 1).

A significant difference was observed regarding duration of surgery between group I and II (28.42±3.57 minutes Vs 19.74±2.44 minutes) with p-value 0.001. In group I 20 (16.39%) patients found to have postoperative bleeding while in group II 6 (4.91%) patients had bleeding, a significant difference was observed between both groups with p-value 0.03. Hospital stay was significantly shorter in group II 2.52±0.76 days as compared to group I 5.36±1.62 days with p-value 0.002. In group I 70 (57.38%) and in group II 75 (61.48%) patients returns to routine activity after 1 week postoperatively, difference was statistically not significant with p-value 0.22. A significant difference was observed regarding postoperative pain between group I and II 5.60±2.47 and 2.01±0.81 (p-value 0.001) (Table 2). Regarding wound infection no significant difference was observed between both groups I and II (7 Vs 5 patients) with p-value >0.05 (Fig. 1).

At final follow up patients received stapled hemorrhoidopexy had high recurrence rate found in 27 (22.13%) patients as compared to conventional hemorrhoidectomy 7(5.74%) patients, a significant difference was observed between both groups with p-value 0.003 (Table 3).

Table 1 Demographical details of all the patients

Variable	Group I	Group II	P value
Age (yrs)	42.4±11.58	41.2±10.86	0.61
Sex			
Male	102 (83.61)	105 (86.07)	>0.05
Female	20 (16.39)	17 (13.93)	
BMI (Kg/m)	23.14±3.51	24.02±2.8	0.67
Degree of disease			
Grade III	90 (73.77)	86 (70.49)	>0.05
Grade IV	32 (26.23)	36 (29.51)	

Table 2: Comparison of postoperative short-term outcomes between both groups

Variable	Group I	Group II	P value
Operation time (min)	28.42±3.57	19.74±2.44	<0.001
Bleeding			
Yes	20 (16.39)	6 (4.91)	0.03
No	102 (83.61)	116(95.09)	
Return to work			
Yes	70 (57.38)	75 (61.48)	N/S
No	52 (42.62)	47 (38.52)	
PO Pain	5.60±2.47	2.01±0.81	0.001
Hospital Stay (days)	5.36±1.62	2.52±0.76	0.002

Fig. 1: Comparison of postoperative wound infection between both groups

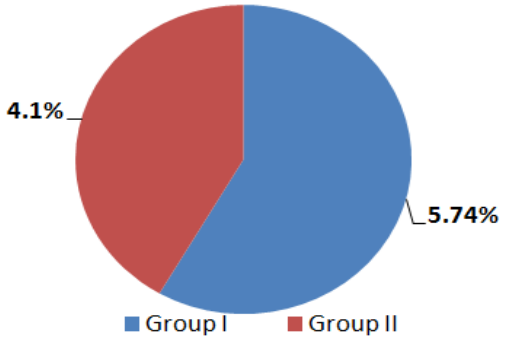

Table 3: Incidence of recurrence between both groups at final follow-up

Recurrence	Group I	Group II	P value
Yes	7 (5.74)	27 (22.13)	0.03
No	115 (94.26)	95 (77.87)	

DISCUSSION

Hemorrhoidectomy is one of the commonly performed surgical intervention across the world because of high prevalence of hemorrhoidal disease. Many of techniques have been used with aimed to reduced the postoperative complications, in which traditional open or close method and stapled hemorrhoidectomy shows better post-operative outcomes with fewer rate of complications[11,12].

The present study was conducted aimed to examine the outcomes of conventional open method and compared with stapled hemorrhoidopexy. In this regard 244 patients with grade III and IV hemorrhoidal disease were enrolled. Majority of patients 83.61% and 86.07% in group I and II were males while females were 16.39% and 13.93%. Mean age of patients was 42.4±11.58 years and 41.2±10.86 years in group I and II. We found no significant difference regarding age and gender between both groups. These results showed similarity to many of previous studies in which majority of patients were male 75% to 85% with average age 44 years[12,13].

In our study we found that a significant difference was observed regarding duration of surgery between conventional and stapled hemorrhoidopexy groups (28.42±3.57 minutes Vs 19.74±2.44 minutes) with p-value 0.001. In group conventional 20 (16.39%) patients found to have postoperative bleeding while in stapled group 6 (4.91%) patients had bleeding, a significant difference was observed between both groups with p-value 0.03. These results were similar to many of previous studies[14,15]. A study conducted by Samee et al[16] regarding comparison of outcomes between traditional hemorrhoidectomy versus stapled hemorrhoidopexy, in which they reported that stapled hemorrhoidopexy had shorter time duration of surgery as compared to traditional hemorrhoidectomy with p-value <0.05. They also reported that stapled hemorrhoidopexy had less postoperative bleeding 3.9% as compared to traditional 9.3%.

In this study we found that length of hospital stay was significantly shorter in group II 2.52±0.76 days as compared to group I 5.36±1.62 days with p-value 0.002. In group I 70 (57.38%) and in group II 75 (61.48%) patients returns to routine activity after 1 month postoperatively, difference was statistically not significant with p-value 0.22. A significant difference was observed regarding postoperative pain between group I and II 5.60±2.47 and 2.01±0.81 (p-value 0.001). A study conducted by Wang et al[17] reported that no significant difference was observed regarding postoperative pain by VAS between PPH stapled and DST stapled hemorrhoidectomy with p-value 0.02. Another study conducted by Rulaniaet al[18] reported that stapled hemorrhoidopexy had significantly shorter hospital stay 3.10±0.75 days as compared to conventional open hemorrhoidectomy 6.06±0.94 days. They also reported less postoperative pain in stapled group 2.63±0.76 as compared to conventional 5.63±0.72. A study Aggarwalet al[19] reported that Fifty-two per cent of the patients returned to their routine work postoperatively in 2 days (p=0.002), 32% within 3 days (p=0.005) and only 16% within 4 days (p=0.05).

In present study the primary outcome was recurrence of hemorrhoids and we found that patients received stapled hemorrhoidopexy had high recurrence rate found in 27(22.13%) patients as compared to conventional hemorrhoidectomy 7(5.74%) patients, a significant difference was observed between both groups with p-value 0.003. These results were similar to the study by Samee et al[16] in their study the recurrence was high in stapled group as compared to traditional group. Some other studies reported that stapled hemorrhoidopexy had high recurrence as compared to conventional method[20-22].

CONCLUSION

Stapled hemorrhoidopexy had better short-term outcomes such as less surgery time duration, less postoperative bleeding, shorter hospital stay and less postoperative pain as compared to conventional hemorrhoidectomy. However regarding recurrence conventional method had low recurrence rate as compared to stapled hemorrhoidopexy.

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