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## To study postoperative complications between circular stapler hemorrhoidopexy and conventional hemorrhoidectomy

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### Abstract

**Method:** Per-rectal examination with gentle dilatation done after lubrication with xylocaine jelly. Rigid sigmoidoscopy is done to look for any pathology in recto sigmoid region. After doing preliminary painting and draping anal verge is held by three atraumatic forceps at the three points where the prolapse is smaller and the anoderm is slightly everted. Such a maneuver facilitates the introduction of circular anal dilator (CAD 33) after lubrication with xylocaine-Jelly. The introduction of the circular anal dilator-33 along with the obturator cause the reduction of the prolapse of the anoderm and points of anal mucous membrane. After removing the obturator prolapsed. All remaining prolapsing tissue should be pushed back with atraumatic forceps through the window of the circular anal dilator-33.

**Result:** The comparison of mean age between the open hemorrhoidectomy and stapler hemorrhoidopexy groups. The mean age in the open hemorrhoidectomy group was  $41.00 \pm 6.47$  years and in the stapler hemorrhoidopexy group was  $41.55 \pm 11.38$  years. The comparison of age between the two groups was found to be statistically not significant ( $p > 0.05$ ), showing a comparable age between the two groups. Reactionary hemorrhage was seen in 30% patients of open hemorrhoidectomy, while it was seen in 20% patients of stapler hemorrhoidopexy group. There was a statistically no significant association seen between reactionary hemorrhage and the groups ( $p > 0.05$ ), showing a comparable distribution of patients with reactionary hemorrhage in both the groups.

**Conclusion:** In stapler hemorrhoidopexy functional outcome is good as compared to conventional hemorrhoidectomy. Stapler hemorrhoidopexy is associated with less morbidity with fewer complications due to minimal tissue trauma and handling. Although the conventional hemorrhoidectomy is still performed in many higher centers but in this era of minimal invasive surgery the stapler hemorrhoidopexy is fast replacing the conventional hemorrhoidopexy.

**Keywords:** Postoperative, Stapler Hemorrhoidopexy and Conventional Hemorrhoidectomy.

### Introduction

Stapled hemorrhoidopexy avoid the need for wounds in the sensitive perianal area thus reducing post-operative pain considerably, and facilitates a speedier return to normal activities. It does not accompany the pain that usually occurs after resection of the sensitive anoderm, stapled hemorrhoidopexy is a simple, quick and safe procedure that give benefit in term of reducing the postoperative complication namely pain and its sequele with early return to activity <sup>[1]</sup>.

Profuse hemorrhage occurs most often in the early stages of second degree. It can cause chronic anemia rarely, massive bleeding can occur because of portal hypertension. Strangulation and thrombosis. One or more of the internal hemorrhoids prolapse and become gripped by the external sphincter. Further congestion follows because venous return is impeded. It becomes dark purple or black and feels solid. Pain largely disappears but tenderness persists. Second-degree hemorrhoids are most often complicated in this way. It is accompanied by considerable pain <sup>[2]</sup>.

Ulceration, Superficial ulceration of the exposed mucous membrane often accompanies strangulation with thrombosis. Gangrene, Occurs when strangulation is sufficiently tight to constrict the arterial supply of the hemorrhoids. Fibrosis, After thrombosis, the internal hemorrhoids may become converted into fibrous tissue. The fibrosed pile is sessile at first but due to repeated traction during defecation becomes pedunculated <sup>[3]</sup>.

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## Material & Method

Study was conducted in the department of surgery Index Medical College and Associated Hospital Indore between April 2017 to September 2018.

## Inclusion Criteria

All patient of Age more than or equal to 20 years (men and non-pregnant women) and age less than or equal to 60 years.

1. Late II grade hemorrhoids
2. III grade of hemorrhoids
3. IV grade of hemorrhoids were included in study.

## Exclusion Criteria

1. Patient of grade 1st and early 2nd grade of hemorrhoids age  $\leq 20$  years and  $\geq 60$  years
2. Any associated anal pathology like fistula, fissure, previous perianal surgery and other anorectal diseases, pregnancy and severe medical illness
3. Acute hemorrhoid episode with thrombosis
4. Prior hemorrhoidectomy
5. Portal hypertension

## Method

Position  $\rightarrow$  Lithotomy

Anesthesia  $\rightarrow$  Local / Regional

## Minimally invasive procedure for haemorrhoid steps

1. Per-rectal examination with gentle dilatation done after lubrication with xylocaine jelly.
2. Rigid sigmoidoscopy is done to look for any pathology in recto sigmoid region.
3. After doing preliminary painting and draping  $\square$  anal verge

is held by three atraumatic forceps at the three points where the prolapse is smaller and the anoderm is slightly everted

4. Such a maneuver facilitates the introduction of circular anal dilator (CAD 33) after lubrication with xylocaine-Jelly. The introduction of the circular anal dilator-33 along with the obturator cause the reduction of the prolapse of the anoderm and points of anal mucous membrane. After removing the obturator prolapsed
5. All remaining prolapsing tissue should be pushed back with atraumatic forceps through the window of the circular anal dilator-33.

## Results

**Table 1:** Distribution of patients according to sex in stapler hemorrhoidopexy and open hemorrhoidectomy groups

Sex	Open hemorrhoidectomy		Stapler Hemorrhoidopexy	
	No.	%	No.	%
Female	7	35.0	3	15.0
Male	13	65.0	17	85.0
Total	20	100.0	20	100.0

Pearson chi-square value = 2.133, DF=1, P value = 0.144, Not Significant

## Age

Table shows the comparison of mean age between the open hemorrhoidectomy and stapler hemorrhoidopexy groups. The mean age in the open hemorrhoidectomy group was  $41.00 \pm 6.47$  years and in the stapler hemorrhoidopexy group was  $41.55 \pm 11.38$  years. The comparison of age between the two groups was found to be statistically not significant ( $p > 0.05$ ), showing a comparable age between the two groups.

**Table 2:** Comparison of complications in stapler hemorrhoidopexy and open hemorrhoidectomy groups

Complications	Open hemorrhoidectomy		Stapler Hemorrhoidopexy		$\chi^2$ value	P value
	No.	%	No.	%		
Reactionary hemorrhage	6	30.0	4	20.0	0.533, df=1	0.465, NS
Retention of urine	4	20.0	4	20.0	0.000, df=1	1.000, NS
Anal stenosis	2	10.0	1	5.0	0.360, df=1	0.548, NS
Secondary hemorrhage	1	5.0	0	0.0	1.026, df=1	0.311, NS
Postoperative discharge	12	60.0	4	20.0	6.667, df=1	0.010*
Infection	7	35.0	1	5.0	5.625, df=1	0.018*

Pearson chi-square test applied. P value  $< 0.05$  was taken as statistically significant

## Complications

The following table shows the distribution of patients according to complications in the stapler hemorrhoidopexy and open hemorrhoidectomy groups.

Reactionary hemorrhage was seen in 30% patients of open hemorrhoidectomy, while it was seen in 20% patients of stapler hemorrhoidopexy group. There was a statistically no significant association seen between reactionary hemorrhage and the groups ( $p > 0.05$ ), showing a comparable distribution of patients with reactionary hemorrhage in both the groups.

Retention of urine was seen in 20% patients of open hemorrhoidectomy, while it was seen in 20% patients of stapler hemorrhoidopexy group. There was a statistically no significant association seen between retention of urine and the groups ( $p > 0.05$ ), showing a comparable distribution of patients with retention of urine in both the groups.

Anal stenosis was seen in 10% patients of open hemorrhoidectomy, while it was seen in 5% patients of stapler hemorrhoidopexy group. There was a statistically no significant association seen between anal stenosis and the groups ( $p > 0.05$ ),

showing a comparable distribution of patients with anal stenosis in both the groups.

Secondary hemorrhage was seen in 5% patients of open hemorrhoidectomy, while it was seen in 0% patients of stapler hemorrhoidopexy group. There was a statistically no significant association seen between secondary hemorrhage and the groups ( $p > 0.05$ ), showing a comparable distribution of patients with secondary hemorrhage in both the groups.

Postoperative discharge was seen in 60% patients of open hemorrhoidectomy, while it was seen in 20% patients of stapler hemorrhoidopexy group. There was a statistically significant association seen between postoperative discharge and the groups ( $p < 0.05$ ), showing a higher proportion of patients with postoperative discharge in the open hemorrhoidectomy group.

Infection was seen in 35% patients of open hemorrhoidectomy, while it was seen in 5% patients of stapler hemorrhoidopexy group. There was a statistically significant association seen between infection and the groups ( $p < 0.05$ ), showing a higher proportion of patients with infection in the open hemorrhoidectomy group.

## Discussion

The distribution of patients according to complications in the stapler hemorrhoidopexy and open hemorrhoidectomy groups.

Reactionary hemorrhage was seen in 30% patients of open hemorrhoidectomy, while it was seen in 20% patients of stapler hemorrhoidopexy group. There was a statistically no significant association seen between reactionary hemorrhage and the groups ( $p>0.05$ ), showing a comparable distribution of patients with reactionary hemorrhage in both the groups <sup>[4]</sup>.

Again this signifying the most favorable aspect of this group i.e. minimal bleeding as compared to conventional group in post-operative period. Making the procedure more acceptable and favorable to the patients in terms of that stapler hemorrhoidopexy may be done in anemic patients also and acute hemorrhoidal crisis may be tide over without transfusion of Blood <sup>[5]</sup>.

Study done by Agrawal *et al.* (2016) <sup>[6]</sup> reported anal stricture in 33.3% patients of conventional hemorrhoidectomy group, while it was seen in 20% patients of stapler hemorrhoidopexy group, which was statistically not significant ( $p=0.243$ ).

Study done by Idoor *et al.* (2017) <sup>[7]</sup> reported an incidence of 22% bleeding in the open hemorrhoidectomy group, while there was only 14% bleeding in the stapler hemorrhoidopexy group, which was statistically not significant ( $p=0.275$ ).

Retention of urine was seen in 20% patients of open hemorrhoidectomy, while it was seen in 20% patients of stapler hemorrhoidopexy group. There was a statistically no significant association seen between retention of urine and the groups ( $p>0.05$ ), showing a comparable distribution of patients with retention of urine in both the groups.

Study done by Idoor *et al.* (2017) <sup>[7]</sup> reported an incidence of 30% retention of urine in the open hemorrhoidectomy group, while there was only 16% bleeding in the stapler hemorrhoidopexy group, which was statistically not significant ( $p=0.081$ ).

Anal stenosis was seen in 10% patients of open hemorrhoidectomy, while it was seen in 5% patients of stapler hemorrhoidopexy group. There was a statistically no significant association seen between anal stenosis and the groups ( $p>0.05$ ), showing a comparable distribution of patients with anal stenosis in both the groups.

Secondary hemorrhage was seen in 5% patients of open hemorrhoidectomy, while it was seen in 0% patients of stapler hemorrhoidopexy group. There was a statistically no significant association seen between secondary hemorrhage and the groups ( $p>0.05$ ), showing a comparable distribution of patients with secondary hemorrhage in both the groups <sup>[8]</sup>.

## Conclusion

In stapler hemorrhoidopexy functional outcome is good as compared to conventional hemorrhoidectomy. Stapler hemorrhoidopexy is associated with less morbidity with fewer complications due to minimal tissue trauma and handling.

Although the conventional hemorrhoidectomy is still performed in many higher centers but in this era of minimal invasive surgery the stapler hemorrhoidopexy is fast replacing the conventional hemorrhoidopexy.

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