

## To Study the Satisfaction score and Postoperative Complications Comparing between Circular Stapler Hemorrhoidopexy and Conventional Hemorrhoidectomy

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### Abstract

**Background & Method:** Study was conducted in the department of surgery Index Medical College and Hospital & Research Centre, Indore, with total 40 patients 20 in each group Open Hemorrhoidectomy & Stapler Hemorrhoidopexy. 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. **Result:** The mean satisfaction score in the open hemorrhoidectomy group was  $3.00 \pm 0.79$  and in the stapler hemorrhoidopexy group was  $4.05 \pm 0.95$ . The comparison of mean satisfaction score between the two groups was found to be statistically significant ( $p < 0.05$ ), showing a higher satisfaction score in the stapler hemorrhoidopexy group. **Conclusion:** Stapler hemorrhoidopexy is associated with less morbidity with fewer complications due to minimal tissue trauma and handling Post procedure satisfaction was significantly higher in the stapled group as compared to classical Milligan-Morgan procedure.

**Keywords:** Complications, Hemorrhoidopexy, Hemorrhoidectomy & Stapler.

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### Introduction

The technique of stapler hemorrhoidopexy has received much recent enthusiasm as a novel technique in the surgical treatment of hemorrhoids. If the pathological condition leading to hemorrhoidal complication is the prolapse of anal mucosa, it is rational to hypothesize that reduction of such disturbance could be an effective therapy for symptoms[1]. Reduction of the prolapse restoring the normal topographic relationship between anal mucous membrane and the anal sphincters induces an improvement in venous outflow, eliminating the risk of complications. In this procedure, the blood supply to the hemorrhoids is interrupted but the actual A-V malformations are left in-situ[2].

The technique of stapling for hemorrhoids was initially presented by Donald Peck from San Jose, CA approximately fourteen years ago in which the hemorrhoidal tissue was removed by application of two circumferential purse- string sutures and subsequent firing of a circular stapler. However, this technique was standardized in 1993 by Dr. Antonio Longo at the University of Palermo[3].

The surgical treatment of hemorrhoids is one of the earliest exercises in operative surgery and was practiced even in ancient Greece and Rome. However the credit of development of the present procedure goes to Salmon. There are two basic varieties, open and closed, depending on whether or not the anorectal mucosa and perineal skin are closed after the hemorrhoids have been excised and ligated[4].

A vertical incision is made through the mucosa over the hemorrhoid and mucosal flaps are raised on either side to completely uncover the hemorrhoid. It is then dissected away from the underlying internal sphincter, and the pedicle is transfixed, ligated and the pile is excised, the mucosal flaps are approximated using interrupted catgut stitches. [5]

### Material & Method

Study was conducted in the department of surgery Index Medical College and Hospital & Research Centre, Indore from July 2019 to June 2020 with total 40 patients 20 in each group Open Hemorrhoidectomy & Stapler Hemorrhoidopexy.

#### Procedure for Haemorrhoid

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.

#### 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.

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## Results

**Table No. 1: Comparison of satisfaction grade in stapler hemorrhoidectomy and openhemorrhoidectomy groups**

Satisfaction Grade	Open hemorrhoidectomy		Stapler	
	No.	%	No.	%
0	0	0.0	0	0.0
1	0	0.0	0	0.0
2	6	30.0	1	5.0
3	8	40.0	5	25.0
4	6	30.0	6	30.0
5	0	0.0	8	40.0
Total	20	100.0	20	100.0

Pearson chi-square value = 12.264, df=3, P value = 0.007, Significant

In the open hemorrhoidectomy group, 6 (30.0%) patients had satisfaction grade 2, 8 (40.0%) patients had satisfaction grade 3 and 6 (30.0%) patients had satisfaction grade 4.

In the stapler hemorrhoidectomy group, 1 (5.0%) patients had satisfaction grade 2, 5 (25.0%) patients had satisfaction grade 3, 6 (30.0%) patients had satisfaction grade 4 and 8 (40.0%) patients had

satisfaction grade 5. Majority of the patients in the stapler hemorrhoidectomy group had satisfaction grade 5.

There was a statistically significant association seen between satisfaction grade and the groups ( $p < 0.05$ ), showing that the satisfaction grade is dependent on the groups.

**Table No. 2: Comparison of mean satisfaction score between the staplerhemorrhoidectomy and open hemorrhoidectomy groups**

Group	No.	Mean $\pm$ SD	't' value	P value
Openhemorrhoidectomy	20	3.00 $\pm$ 0.79	-3.804, df=38	0.001*
Staplerhemorrhoidectomy	20	4.05 $\pm$ 0.95		

Unpaired 't' test applied. P value = 0.001, Significant

The above table shows the comparison of mean satisfaction score between the open hemorrhoidectomy and stapler hemorrhoidectomy groups.

The mean satisfaction score in the open hemorrhoidectomy group was  $3.00 \pm 0.79$  and in the stapler hemorrhoidectomy group was  $4.05 \pm$

0.95. The comparison of mean satisfaction score between the two groups was found to be statistically significant ( $p < 0.05$ ), showing a higher satisfaction score in the stapler hemorrhoidectomy group.

**Table No. 3: Comparison of complications in stapler hemorrhoidectomy and openhemorrhoidectomy groups**

Complications	Open hemorrhoidectomy		Stapler Hemorrhoidectomy		c2 value	P value
	No.	%	No.	%		
Reactionary hemorrhage	6	30.0	4	20.0	0.533, df=1	0.465, NS
Retentionof 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

## Discussion

The comparison of mean satisfaction grades between the open hemorrhoidectomy and stapler hemorrhoidectomy groups. In the open hemorrhoidectomy group, 6 (30.0%) patients had satisfaction grade 2, 8 (40.0%) patients had satisfaction grade 3 and 6 (30.0%) patients had satisfaction grade 4. [6]

In the stapler hemorrhoidectomy group, 1 (5.0%) patients had satisfaction grade 2, 5 (25.0%) patients had satisfaction grade 3, 6 (30.0%) patients had satisfaction grade 4 and 8 (40.0%) patients had satisfaction grade 5. Majority of the patients in the stapler hemorrhoidectomy group had satisfaction grade 5. [7]

Study done by Idoor et al (2017) [8] reported a significantly higher mean patient satisfaction in the stapled hemorrhoidectomy group ( $3.92 \pm 0.69$ ) in comparison to the open hemorrhoidectomy group ( $3.48 \pm 0.86$ ) ( $p = 0.003$ ).

Study done by Idoor et al (2017)[8] reported an incidence of 22% bleeding in the open hemorrhoidectomy group, while there was only 14% bleeding in the stapler hemorrhoidectomy group, which was statistically not significant ( $p = 0.275$ ).

Study done by Idoor et al (2017)[8] reported an incidence of 30% retention of urine in the open hemorrhoidectomy group, while there was only 16% bleeding in the stapler hemorrhoidectomy group, which was statistically not significant ( $p = 0.081$ ).

Study done by Agrawal et al (2016)[9] reported anal stricture in 33.3% patients of conventional hemorrhoidectomy group, while it was seen in 20% patients of stapler hemorrhoidectomy group, which was statistically not significant ( $p = 0.243$ ).

Study done by Agrawal et al (2016)[9] reported an incidence of 60% postoperative discharge in the conventional hemorrhoidectomy

group, while it was 30% in the stapler group, which was statistically significant ( $p=0.038$ ).

#### Conclusion

Stapler hemorrhoidopexy is associated with less morbidity with fewer complications due to minimal tissue trauma and handling. Post procedure satisfaction was significantly higher in the stapled group as compared to classical Milligan-Morgan procedure.

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