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## Comparison between circular stapler hemorrhoidopexy and conventional hemorrhoidectomy with regards to duration of surgery

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### Abstract

**Background:** The aim of the study is to compare circular Stapler Hemorrhoidopexy and Conventional Hemorrhoidectomy with regards to duration of Surgery, conducted in the Department of Surgery, Bundelkhand Medical College, Sagar.

**Result:** The comparison of mean duration of surgery between the open hemorrhoidectomy and stapler hemorrhoidopexy groups. The mean duration of surgery in the open hemorrhoidectomy group was  $43.55 \pm 5.39$  minutes and in the stapler hemorrhoidopexy group was  $30.05 \pm 2.65$  minutes. The comparison of mean duration of surgery between the two groups was found to be statistically significant ( $p < 0.05$ ), showing a longer mean duration of surgery in the open hemorrhoidectomy group.

**Conclusion:** Patient of hemorrhoids usually avoid surgery due to fear of severe pain after hemorrhoidectomy. Time taken for surgery was significantly less in stapler hemorrhoidopexy group. Stapler hemorrhoidopexy is associated with lesser pain as compared to conventional hemorrhoidectomy.

**Keywords:** Stapler, hemorrhoidopexy, hemorrhoidectomy & surgery

### Introduction

Haemorrhoids are one of the most common disorder of the anal canal. The term HEMORRHOIDS is derived from the Greek adjective meaning bleeding and emphasizes the most important symptom of this disease 1. The word PILE derived from Latin word "pila" meaning ball, can be applied to all patients presenting with this disease as every patient with this disease present with some sort of swelling 2. John Goligher says "at least 50% of the people over the age of fifty have some degree of haemorrhoid formation." 3 Conventional haemorrhoidectomy (CH) is the most commonly practiced surgical procedure and is considered the gold standard in the treatment of piles, but conventional excision is a notoriously painful operation. Most patients have pain on defecation and discomfort at rest in the second and third weeks after surgery because of wound infection and sphincter spasm.

### Material & Method

Study was conducted in the Department of Surgery, Bundelkhand Medical College, Sagar between July 2018 to June 2019.

### 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 grade 2 hemorrhoids
2. Grade 3 of hemorrhoids
3. Grade 4 of hemorrhoids were included in study.

### Exclusion criteria

1. Patient of grade 1<sup>st</sup> and early 2<sup>nd</sup> 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

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4. Prior hemorrhoidectomy
  5. Portal hypertension
- Position - Lithotomy  
Anesthesia - Local/Regional

#### Minimally invasive procedure for haemorrhoid steps

- a) Per-rectal examination with gentle dilatation done after lubrication with xylocaine jelly.
- b) Rigid sigmoidoscopy is done to look for any pathology in recto sigmoid region.
- c) After doing preliminary painting and draping  $\diamond$  anal verge is held by three atraumatic forceps at the three points where

- the prolapse is smaller and the anoderm is slightly everted
- d) 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.
  - e) 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 hemorrhoidectomy and open hemorrhoidectomy groups

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

**Table 2:** Comparison of mean duration of surgery between the stapler hemorrhoidectomy and open hemorrhoidectomy groups

Group	No.	Mean $\pm$ SD	't' value	P value
Open Hemorrhoidectomy	20	43.55 $\pm$ 5.39	10.063, df=38	0.000*
Stapler Hemorrhoidectomy	20	30.05 $\pm$ 2.65		
Unpaired 't' test applied. P value = 0.000, Significant				

The table shows the comparison of mean duration of surgery between the open hemorrhoidectomy and stapler hemorrhoidectomy groups. The mean duration of surgery in the open hemorrhoidectomy group was 43.55  $\pm$  5.39 minutes and in the stapler hemorrhoidectomy group was 30.05  $\pm$  2.65 minutes. The comparison of mean duration of surgery between the two groups was found to be statistically significant ( $p < 0.05$ ), showing a longer mean duration of surgery in the open hemorrhoidectomy group.

#### Discussion

##### Duration of surgery

The comparison of mean duration of surgery between the open hemorrhoidectomy and stapler hemorrhoidectomy groups.

The mean duration of surgery in the open hemorrhoidectomy group was 43.55  $\pm$  5.39 minutes and in the stapler hemorrhoidectomy group was 30.05  $\pm$  2.65 minutes. The comparison of mean duration of surgery between the two groups was found to be statistically significant ( $p < 0.05$ ), showing a longer mean duration of surgery in the open hemorrhoidectomy group [6].

The minimum duration stapler group 25 min and maximum duration 35 min.

The minimum duration conventional group 35 min and maximum 55 min.

Study done by Agrawal *et al.* (2016) [7] reported operative duration of <30 minutes in 40% patients who underwent conventional hemorrhoidectomy, and 22 (73.3%) patients who underwent stapler hemorrhoidectomy.

#### Conclusion

Patient of hemorrhoids usually avoid surgery due to fear of severe pain after hemorrhoidectomy. Time taken for surgery was significantly less in stapler hemorrhoidectomy group. Stapler hemorrhoidectomy is associated with lesser pain as compared to conventional hemorrhoidectomy.

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