

Original Research Article

# Comparative study between stapler and open hemorrhoidectomy in the management of grade III/ IV hemorrhoids


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## Abstract

**Background:** The rectum serves the function of a temporary reservoir for faeces and unfortunately when hemorrhoids raise their ugly heads, the natural process of eliminating waste from the body causes discomfort to the patient.

**Aim:** The aim of my dissertation topic was to compare stapler hemorrhoidectomy (MIPH) with open hemorrhoidectomy in the management of 3<sup>rd</sup> / 4<sup>th</sup> degree hemorrhoids with reference to complications like pain, retention of urine, bleeding and anal incontinence, comforts to the patient, comforts to the surgeon, Intra operative complications, hospital stay, cost of surgery.

**Materials and methods:** Inclusion criteria were primary III and IV degree hemorrhoids. Exclusion criteria were patients with associated co-morbid conditions, associated gastrointestinal diseases, recurrent hemorrhoids. Parts of a PPH 03 stapler device: Icon hea, Anvi, Shaft of instrument, Handle with safety lock.

**Results:** Most of the patients belong to age group 41-50 and above 67% of the patients are between the age group of 41-60. About 83% of patients were males; females accounted for only 17%. The average post-operative stay for patients who underwent stapler hemorrhoidectomy was 3 days, whereas for open hemorrhoidectomy 4.6 day. Out of 100 patients only 60 cases came for follow up. The period extended from 2 months to 30 months. Stenosis was more common after open

hemorrhoidectomy whereas recurrence was more common after stapler hemorrhoidectomy.

**Conclusion:** Hemorrhoids is a common problem worldwide, a penalty paid by human beings for their erect posture. Lack of fiber in diet and chronic constipation are the root causes for this problem. The common mode of presentation is painless bleeding, prolapsing pile mass and pain when complicate.

## **Key words**

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Stapler, Hemorrhoidectomy, Grade III/ IV hemorrhoids.

## **Introduction**

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The rectum serves the function of a temporary reservoir for faeces and unfortunately when hemorrhoids raise their ugly heads, the natural process of eliminating waste from the body causes discomfort to the patient. Though the conventional management of hemorrhoids by open hemorrhoidectomy causes post operative discomfort and other complications to the patients, it is cost effective where as the newer modality stapler hemorrhoidectomy (MIPH) is believed to cause less discomfort, lesser complications and shorter hospital stay, which prompted the comparative study of two different modalities of management for hemorrhoids i.e. Stapler hemorrhoidectomy and open hemorrhoidectomy [1-3].

## **Materials and methods**

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Work was done in Fahima Institue of Medical Sciences Kadapa, from June, 2014 to December, 2015. : Inclusion criteria were primary III and IV degree hemorrhoids. Exclusion criteria were patients with associated co-morbid conditions, associated gastrointestinal diseases, recurrent hemorrhoids. Parts of a PPH 03 stapler device: Icon hea, Anvi, Shaft of instrument, Handle with safety lock.

## **Results**

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### **Age incidence**

Most of the patients belong to age group 41-50 and above 67% of the patients are between the age group of 41-60.

### **Sex incidence**

About 83% of patients where males; females accounted for only 17%.

## **Complaints**

Bleeding per rectum was the most common complaint; the next common complaint was mass per rectum. Bleeding ranged from few drops of blood to 10-15 cc of blood per day during or after defecation. Pain was associated with grade IV or complicated hemorrhoids and discomfort with grade III hemorrhoids

## **Constipation**

82% of the patient had previous history of constipation

## **Mass per rectum**

56 Patents complained of mass per rectum out of whom 40 were reducible and 16 irreducible.

## **Grade of hemorrhoids**

Out of the total number 100 patients 73 patients had grade III hemorrhoids and 27 patients had grade IV hemorrhoids.

## **Operating time**

The average operating time for stapler hemorrhoidectomy was 20-30 min and for open hemorrhoidectomy 31-40 min. Mean time taken for stapler hemorrhoidectomy was 28.7 min and for open hemorrhoidectomy 36.4 min.

## **Intra-operative complications**

Bleeding seen in all the cases of open hemorrhoidectomy; ranged from few ml to 50 ml. In cases of stapler hemorrhoidectomy 2 cases had intraoperative bleed which was controlled by placing additional sutures with 2.0 catgut or 2.0 vicryl.

## **Short term complications**

The most common post operative complication

was bleeding in cases of open hemorrhoidectomy which was in the form of dressing soakage or few drops of blood while passing faeces. Pain usually appeared after wearing off of spinal anesthesia for which NSAIDs or Tramadol was used.

### **Post-operative hospital stay**

The average post-operative stay for patients who underwent stapler hemorrhoidectomy was 3 days, whereas for open hemorrhoidectomy 4.6 days

### **Long term complication**

Out of 100 patients only 60 cases came for follow up. The period extended from 2 months to 30 months. Stenosis was more common after open hemorrhoidectomy whereas recurrence was more common after stapler hemorrhoidectomy.

### **Discussion**

The prospective study that was conducted in various hospitals in Kadapa showed that hemorrhoids were common in the age group of 40yrs and above. It is as per the conventional teaching. There was less number of patients above 60 years as those patients were associated with other comorbid conditions and were excluded from the study group. Male patients are more in number than female patients. Bleeding, pain and mass per rectum were the most common complaints as only grade III and grade IV were included in the study. There was painless bleeding ranging from few drops to about 10ml per defecation. Pain was also common as it is associated with complicated hemorrhoids which were included in the study. Constipation was seen in 82% of cases and it goes in favor of the conventional saying that chronic constipation is a major factor in the etiology of hemorrhoids. In our study 72% were grade III hemorrhoids and rest were grade IV hemorrhoids as grade III hemorrhoids are more common than grade IV hemorrhoids [4-6].

The operating time in our study for stapler hemorrhoidectomy was 28.7min and for open

hemorrhoidectomy 36.44 min. It is as per the study conducted in France by Dr. Jean François Gravié. Stapled hemorrhoidectomy was significantly faster than open hemorrhoidectomy (21 min versus 31 min). The time taken for stapler hemorrhoidectomy was more as the procedure is relatively new in our hospital and there is a learning curve involved.

Intra operative bleeding in cases of stapler hemorrhoidectomy was seen only in 2 patients whereas all the cases of open hemorrhoidectomy were associated with bleeding ranging from few ml to 50 ml depending on the size of hemorrhoids. The staples act as haemostatic as well as anastomotic linkage. Intraoperative bleeding occurs when the stapler is improperly applied or the staples give away. This bleeding is controlled by additional sutures at the bleeding point. This complication should be rare but as per the study of Randomized Control Trials done in different centers in United Kingdom by Dr. Justin Davis; the intra operative bleeding rates were similar in both open and stapler hemorrhoidectomy [7-10].

The intra-operative bleeding was less in our study because great care was taken before, during and after the stapler is applied so as not to miss the whole mucosa, giving tamponading effect before and after application of the stapler and avoidance of partial firing of stapler [11, 12].

Bleeding in the post operative period was nil in the cases of stapler hemorrhoidectomy whereas bleeding was seen in all the cases of open hemorrhoidectomy which ranged from dressing soakage to about few drops of blood during defecation. It is as per the study conducted in France by Dr. Jean François Gravié in which there were no cases of bleeding in the post operative period after application of the stapler. It is also as per the Randomized Control Trials done in different centers in United Kingdom by Dr. Justin Davis; in which the post operative bleeding was significantly lower [13, 14].

## Conclusion

Hemorrhoids are a common problem worldwide, a penalty paid by human beings for their erect posture. Lack of fiber in diet and chronic constipation are the root causes for this problem. The common mode of presentation is painless bleeding, prolapsing pile mass and pain when complicated.

Surgery for hemorrhoids has evolved over a period of time. Time tested open hemorrhoidectomy (excision ligation) is still the gold standard all over the world. Every newer procedure is compared with open hemorrhoidectomy for its efficacy.

Stapler hemorrhoidectomy though expensive has distinct advantages of shorter operating time with minimal intra-operative bleed, lessened postoperative complications of bleeding, urinary retention and pain. Additional benefits include shorter hospital stay and possibly early return to work. This study reiterates the above advantages; however in the long term follow up recurrence seems to be marginally higher though stenosis is almost negligible in comparison to open hemorrhoidectomy.

Stapler hemorrhoidectomy is thus a viable alternative to open hemorrhoidectomy in a selected group of patients who can afford the stapler with distinct advantages. The procedure is reproducible, easy to perform and different operators can achieve comparable outcomes as long as they follow the underlying principles and have a minimum degree of experience.

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