

Stapled Hemorrhoidectomy: A Safe Procedure for Third and Fourth Grade Hemorrhoids

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ABSTRACT

Objective: To evaluate the safety outcome of staple hemorrhoidectomy in grade III and IV hemorrhoids.

Study Design: Descriptive study

Place and Duration of Study: Department of Surgery, Shahida Islam Medical Complex, Lodhran from 1st July 2020 to 30th June 2021.

Methodology: Seventy patients were selected who were suffering from third or fourth grade hemorrhoids. The age of the patients was between 21-56 years with both gender been presented. Longos method was opted with spinal analgesic been delivered in lithotomy positioning. The complete surgical protocol was maintained with preoperative antibiotic deliverance. The procedure took 30-50 minutes. Patient was then kept in recovery room for three hours post operation and all postoperative antibiotics were timely administered.

Results: Mean age of study participants was 41.2±3.2. Men appeared to be higher in number as compared to women. Grade III patients were more in number as compared to grade IV. Most common complication which was observed in present study is postoperative pain. Majority of the patients (70%) showed no associated complications.

Conclusion: Staple hemorrhoidectomy is appeared to be a safe and reliable surgical procedure for the treatment of grade III and grade IV hemorrhoids.

Keywords: Hemorrhoids, Surgical procedure, Stenosis, Efficacy, Conventional

INTRODUCTION

Hemorrhoids are swollen veins in lower rectum or anus which can occur due to many reasons. It is a common surgical procedure as data also suggests that three out of four individual's experience hemorrhoids from time to time. Different surgical interventions: both invasive and conservative methods are employed for the treatment of hemorrhoids. Degree and cause of hemorrhoids usually kept into consideration before choosing any treatment method. An advance technique, named as staple hemorrhoidectomy now considers a preferred method for hemorrhoids treatment. It has good overall results with very few side effects.¹⁻⁴

Studies suggested that, this model of treatment has various advantages over other conventional treatment methods. Few side effects which are most associated with this technique is postoperative pain but incidence rate of it is also very negligible. A Korean study also demonstrated efficacy of this surgical method and regarded it as safe procedure for hemorrhoids treatment.⁵⁻⁸ Other study also suggested almost equal efficacy results in conventional and staple method.⁹ Contrary, a nationwide study conducted in Netherlands showed opposite results and marked staple method as less effective as compared to conventional surgical method.¹⁰

Side effects that can cause as a result of this treatment are anal stenosis, wound discharge, anal fistulas and hematoma formation.¹¹⁻¹³ Few other related effects can also be linked but it also directly depends upon the awareness of operator or surgeon regarding this procedure and also communication with the patient regarding management. Despite of common surgical procedure, limited data is available regarding the safety and efficacy of this procedure. Present study was aimed to evaluate the efficacy and safety assessment of staple hemorrhoidectomy in the treatment of grade III and grade IV hemorrhoids. Associated complications were also considered for the better outcome evaluation.

MATERIALS AND METHODS

This descriptive prospective study on stapled hemorrhoidectomy cases were performed at Department of Surgery, Shahida Islam

Medical Complex, Lodhran from 1st July 2020 to 30th June 2021. It was which included all those cases who were suffering from third or fourth grade hemorrhoids. This study had been accepted by ethical committee and every patient who was enrolled as participant of the study was first asked to sign an inform consent. Only those patients who themselves showed willingness of opting stapled hemorrhoidectomy were taken as participants. Patients who were suffering from auto immune infections, uncontrolled comorbidities as diabetes and hypertension, psychiatric illnesses, bleeding disorders or any other immune compromised state were excluded from the study. A total of 70 patients were selected on basis of prevalence of hemorrhoids in general population as 17% through WHO sample size calculation software which also applied 95% confidence interval and 5% margin of error with 80% power of test. The age of the patients was between 21-56 years with both gender been presented. The hemorrhoid duration was 6 months to 12 years. Longos method was opted with spinal analgesic been delivered in lithotomy positioning. The complete surgical protocol was maintained with pre operative antibiotic deliverance. The procedure took 30-50 minutes. Patient was then kept in recovery room for three hours post operation and all post operative antibiotics were timely administered. Majority of the cases were planned discharged on day 3 depending upon frequency of complication generation. Visual Analog scoring was used for identifying the pain scores in patients with pain determined as a score greater than six. Details in context to overall patient's health, complication status including pain, shock, prolapse, bleeding were documented within 48 hours of surgery and were documented on a well structured questionnaire. Third grade hemorrhoid was termed as prolapse which is presented during the defecation and required manual reduction while fourth grade was termed as persisting prolapsed despite of attempts of prolapse reduction. The data was analyzed in terms of frequencies and percentages while mean and standard deviations were also used for describing numerical values. SPSS version 25.0 was used for analysis.

RESULTS

The mean age of study participants was 41.2±3.2. Men appeared to be higher in number as compared to women and men to women

ratio is almost 2:1. Patients who were coming for surgical removal of hemorrhoids (depending upon the cause and severity) were had mean duration of hemorrhoids as 5.6 ± 4.2 (Table 1). Grade III and grade IV hemorrhoids patients were only treated with staple hemorrhoidectomy and grade III patients were more in number as compared to grade IV (Fig. 1).

Postoperative complications related with this surgical procedure as appeared in 30% of the study participants. Majority of the patients (70%) showed no associated complications (Table 2). Most common complication which was observed in present study is postoperative pain in upto 42.9% of the patients who developed associated complications. Bleeding appeared to be other common side effects with this surgical method. Anal fissure, stenosis and sepsis were noticed in very few patients (Table 3).

Table 1: Age and Gender distribution with duration of hemorrhoids (n=70)

Variable	No.	%
Gender		
Men	47	67.2
Women	23	32.8
Age (years)	41.2 $\pm$ 3.2	
Hemorrhoid duration	5.6 $\pm$ 4.2	

Table 2: Frequency of complication with stapled hemorrhoidectomy

Status after stapled hemorrhoidectomy	No.	%
Complications	21	30
No Complications	49	70

Table 3: Presentation of complications frequency in cases of stapled hemorrhoidectomy

Complications	No.	%
Pain post operation	9	42.9
Shock	1	4.7
Bleeding	5	23.8
Prolapse	2	9.5
Anal Fissure	2	9.5
Anal Stenosis	1	4.7
Sepsis	1	4.7

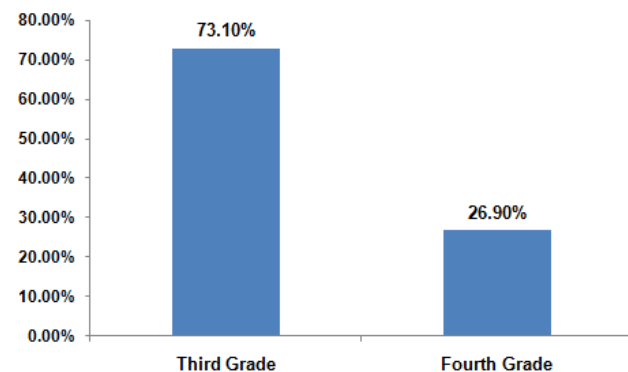


Fig. 1: Hemorrhoid grade distribution

DISCUSSION

Various treatment methods are available for the treatment of hemorrhoid including both conventional and advanced methods. Nearly all treatment methods have some sort of associated risk and complications. Staple hemorrhoidectomy is now considered a preferable method due to less postoperative side effects. Various studies have already documented its efficacy though few studies also report higher number of related side effects with this surgical procedure as compared to the conventional method.¹⁴ Present study was also aimed to highlights the related side effects and its effectiveness in the treatment of grade III and IV hemorrhoids.

In present study, men appeared to be higher in men as compared to women. Similar results have been reported in previous findings of our own country and also study conducted in India. Possible explanation is that, lesser females reaching to hospital for the treatment of hemorrhoids due to cultural and social

differences or females are might be less prone to the development of haemorrhoids.^{15,16}

Associated complications were also noticed in our study. Postoperative surgical pain appeared to be the main outcome after this surgical procedure which was noticed in 42.85% of the study participants. Similar results have already been documented in previous studies in which postoperative frequency was very higher among individuals.^{16,17} Few other studies also reported some other complications. Difference in the results might be due to pain threshold difference which vary from population to population and cultures. Another reason might be different pain scoring method and strategy which is different in different studies.^{18,19} Duration of hemorrhoids before surgical involvement was in the range of 6 months to 1 year. Early diagnosis and treatment save person from numerous complexities and problems. Therefore, these results suggested that, staple hemorrhoidectomy is a safe and reliable method for hemorrhoids treatment.

CONCLUSION

Staple hemorrhoidectomy is appeared to be a safe and reliable surgical procedure for the treatment of grade III and grade IV hemorrhoids. Better results were observed in terms of postoperative pain and should be considered as a preferable method to minimize postoperative complications.

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