ORIGINAL ARTICLE

Outcome of Stapled Haemorrhoidectomy, A Systematic Review

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ABSTRACT

Objective: The objective of this study is to see the outcome of stapled technique of haemorrhoidectomy in terms of operative time and complications like urinary retention and perineal infection.
Study Design: Descriptive case series
Setting: Department of General Surgery, Unit-I, Sir Ganga Ram Hospital, Lahore.
Duration of Study: Six months from 23-May-2011 to 22-December-2011.
Subjects and Methods: Two hundreds of patients fulfilling the criteria of study were included in the study. All patients underwent stapled haemorrhoidectomy. They were followed up during early postoperative period i.e. first day after surgery, in first week and at 15 days. Postoperative complications like urinary retention and perineal infection were seen, operative time was noted. Other variable i.e. postoperative bleeding (it is the bleeding with bowel movements during first and second week postoperatively) was also noted.
Results: Mean age of patients in study was 46.1±7.9 years. There were 112 (56%) male and 88 (44%) female patients. The mean operative time of the patients was 23.2±3.9 minutes. Postoperative urinary retention was found in 6 (3%) patients. Perineal infection was found in 7 (3.5%) patients and postoperative bleeding was found in 9 (4.5%) patients at 7th postoperative day. No complication was found in any patient at 15th postoperative day.
Conclusion: It was concluded from this study that stapled technique of haemorrhoidectomy reduced the operative time and postoperative complications like urinary retention, perineal infection and postoperative bleeding.

Key Words: Stapled haemorrhoidectomy, postoperative complications, urinary retention, perineal infection, postoperative bleeding.

INTRODUCTION

Haemorrhoids is the commonest ailment of anorectal region, it affects both sexes and is common in prosperous societies. About 60% of hospitalized patients are male[1]. Patients present with painless bleeding during bowel movements, itching, pain or discomfort and protrusion from anus[2]. Hemorrhoids were historically treated by simple dietary modification, sclerotherapy injection, and surgical procedure. Surgery was postulated by Milligan Morgan in late 1930s. Over the last decade therapeutic approach of anorectal disorders have been profoundly modified and for 3rd and 4th degree Haemorrhoids technique of stapled haemorrhoidectomy was described by Lonogo in 1998, which utilizes a purpose designed stapling gun[3, 4].

Certain complications like urinary retention, anal tags, tenderness on digital per-rectal examination and discharging wounds are higher in open technique of haemorrhoidectomy. Mean length of operative time is 19.6±5.9 minutes in open haemorrhoidectomy and 22.4±7.2 minutes in stapled technique, no bleeding in 93.3% in open technique and 96.7% in stapled technique, urinary retention in 10% in open and 6.7% in stapled technique, wound discharge is 26.7% in open and 10% in stapled technique of haemorrhoidectomy[5].

Stapled haemorrhoidectomy reduces post operative pain, analgesic consumption, operative time and bleeding[6, 7].

Recently, stapled haemorrhoidectomy has been advocated as an alternative technique that is better in all aspects. Besides the improvement in the cosmetic appearance, there is lesser hospital stay (90% of stapled and 55% of open haemorrhoidectomy having a stay of less than 24 hours[8,9,10]. The patients are comfortably mobilized

within 24 hours of the procedure (93% a shorter convalescence time)[11]. There is also marked reduction in the pain after operation (95% less)[11] and as there is negligible bleeding in the postoperative period (6% of patients having postoperative bleeding), so there is no need to pack the wound[11].

The objective of our study was to find the outcome of stapled haemorrhoidectomy in terms of operative time and complications like urinary retention and perineal infection.

MATERIAL AND METHODS

Study was carried out in General Surgery Department, Unit-I, Sir Ganga Ram Hospital, Lahore. It was a descriptive case series.

Sample size of 200 patients was measured with 95% confidence level, d=1, and taking expected mean±SD of operative time i.e. 22.4±7.2 minutes in stapled haemorrhoidectomy technique in patients with prolapsed haemorrhoids. Sampling technique was non-probability purposive sampling. Patients with prolapsed Haemorrhoids on clinical examination; patients with age 18 years and above; and patients from both sexes were included in this study. While, Patients having associated anal fissure, strangulated or thrombosed haemorrhoids, fistula and recurrent haemorrhoids on history and clinical examination were excluded from study. Similarly, patients with associated diseases like chronic liver disease and gastrointestinal tumors on history were also excluded from this study. Two hundred patients who fulfilled the inclusion criteria were selected from outpatients department of Surgical Unit-I, Sir Ganga Ram Hospital Lahore. All patients had given informed consent. Demographic information like age, sex and address were recorded. All patients were undergone stapled haemorrhoidectomy. The procedure was done by Professor, Associate Professor and Assistant Professor. All patients were given same kind and dose of analgesic and antibiotics in postoperative period, surgical notes were maintained. They were followed up during early postoperative period i.e. first day after surgery, in first week and at 15th days. Postoperative complications like urinary retention and perineal infection were seen, operative time was noted. Other variable i.e. postoperative bleeding (it is the bleeding with bowel movements during first and second week postoperatively) was also noted. All this information was recorded on a proforma which was specially designed for this. Entry of data was done into SPSS version 10 and was accordingly analyzed. The variables were age, sex, operative time and postoperative compilations like postoperative urinary retention and perineal infection. Descriptive statistics was calculated. Mean and standard deviation were calculated for age and operative time. Frequency and percentages were calculated for sex and complications i.e. urinary retention and perineal infection.

RESULTS

Mean age range in years in study was 46.1±7.9. Six (3%) of them were in range of 20-30 years, 50 (25%) in 31-40 years, 94 (47%) of them in 41-50 years, 44 (22%) of them in 51-60 years while 6 (3%) were in 61-70 years (Table 1). In the study, 112 (56%) were males and 88 (44%) were females (Table 2). The mean operative time was 23.2±3.9 minutes. Sixty one (30.5%) had operative time range of 15-20 minutes, 78 (39%) patients in the operative time range of 21-25 minutes and 61 (30.5%) operative time of 26-30 minutes (Table 3). Only six (3%) had postoperative complication of urinary retention while 194 (97%) had no urinary retention (Table 4).

Table1: Distribution of patients by age (n=200)

Age (Years)	No. of patients	Percentage
20-30	6	3.0
31-40	50	25.0
41-50	94	47.0
51-60	44	22.0
61-70	6	3.0
Mean±SD	46.1±7.9	

Key: n=Number of Patients; SD=Standard Deviation

Table 2: Distribution of patients by sex (n=200)

Sex	No. of patients	Percentage
Male	112	56.0%
Female	88	44.0%
Total	200	100.0%

Key: n=Number of Patients

Postoperative compilations at 7 days, perineal infection was found in 7 (3.5%) patients and

postoperative bleeding was found in 9 (4.5%) patients (Table 5). In the distribution of patients by postoperative compilations at 15th days, no complication was found in any patient at 15th postoperative day (Table 6).

Table 3: Distribution of Patients by operative time (n=200)

Operative time (Minutes)	No. of patients	Percentage
15-20	61	30.5
21-25	78	39.0
26-30	61	30.5
Mean±SD	23.2±3.9	

Key: n=Number of Patients; SD=Standard Deviation

Table 4: Distribution of patients by postoperative complication of urinary retention (n=200)

Urinary retention	No. of patients	Percentage
Yes	6	3.0
No	194	97.0
Total	200	100.0

Key: n=Number of Patients

Table 5: Distribution of patients by postoperative complications at 7th days (n=200)

Postoperative complications	Yes		No	
	No.	% age	No.	% age
Perineal infection	7	3.5	193	96.5
Postoperative bleeding	9	4.5	191	95.5

Key: n=Number of Patients

Table 6: Distribution of patients by postoperative complication at 15 days (n=200)

Postoperative complications	Yes		No	
	No.	% age	No.	% age
Perineal infection	0	0	200	100.0
Postoperative bleeding	0	0	200	100.0

Key: n=Number of Patients

DISCUSSION

Stapled haemorrhoidectomy, for the first time, was described by Longo in 1998[12]. For symptomatic haemorrhoids, stapled haemorrhoidectomy has evolved as the procedure of choice. It has been shown in several studies that this technique is safe, effective and this procedure is free of relative complications. It has reduced requirement for analgesia, fewer days off work and patient is discharged rapidly[13,14,15]. Symptomatic haemorrhoids, historically, are being treated by diet modification, cryotherapy, sclerotherapy injection, band ligation and surgical procedure[16,17,18].

For haemorrhoids, no single best therapeutic option is available. For haemorrhoids open Milligan–Morgan technique was recommended in the late decade of 1930's. But, this is associated with risk of severe post-operative bleed, postoperative pain, the risk of anal stenosis and sphincter injury[18].

However, on overall safety and the acceptability of stapled haemorrhoidectomy still exists. Nonetheless, there have been recently positive reports of stapled haemorrhoidectomy especially in respect to recovery, decreased post-op pain and adverse functional problems. A study of Pavlitidsi et al[19] had eighty patients with haemorrhoidal disease of 2nd to 4th degree and patients were selected on random basis to undergo either the stapled Haemorrhoidectomy (group 1) or Open technique(group 2) with epidural anesthesia. Study showed good post-op pain scores, decreased needs of mean epidural morphine and reduced mean hospital stay with stapled haemorrhoidectomy. But, a recent research from New Zealand[20] documented that stapled haemorrhoidectomy was much costly, and its outcoome should be measured prudently.

Numerous other studies have even showed that stapled haemorrhoidectomy could be done as a day case surgery. Patients undergoing stapled haemorrhoidectomy had short hospital stay, postoperative pain, painkillers needs and they even very early to resume their work.[8,15,21] Day case procedure has been the recently adopted by NHS to increase better patient care and to reduce waiting times. However, all surgeries are not favorable for Day Case but only those requiring reduced post operative hospital stay, just moderate amounts of analgesia, and have fewer complications. Moreover, in 2001, the Audit Commission added haemorrhoidectomy to be its

twenty five techniques suitable as day case surgery[21].

In our study, patients' mean age was 46.1±7.9 years. While in Riaz et al[3], it was 49.8 years. In Khan et al[5] mean age was 40.7±11.6 years. Both studies have results favouring ours. In our study there were 56% male and 44% female patients. While, in Riaz et al[3] 65% were males while 35% were females; that also coincides with ours. In our study mean time of operation was 23.2±3.9 minutes. And, in Riaz et al[3] it was 24 minutes, which is favorable with ours. In Khan et al[5] the mean time of operation ,22.4±7.2 minutes, also endorsed our study.

In a study conducted by us, the postoperative complication of urinary retention was only in 3% patients. While in Riaz et al[3] the postoperative complication of urinary retention was in 1.5% patients and in Khan et al[5,] it was 6.7% patients. Both studies endorse our study.

In our study the complication of perineal infection at 7th day was only in 3.5% subjects. While in Riaz et al[3] the postoperative complication of perineal infection was in 1.5% patients, and in Khan et al[5] it was 10% patients. Both studies also endorse our study.

In our study the complication of postoperative bleeding at 7th postoperative day was in 4.5% subjects. While in Riaz et al[3] the postoperative complication of postoperative bleeding was in 1.5% patients, and in Khan et al[5] it was in 3.3% patients. Both studies also endorse our study.

On the basis of this discussion, it is concluded that stapled haemorrhoidectomy reduces the operative time and postoperative complications (urinary retention, perineal infection and postoperative bleeding).

CONCLUSION

It is concluded from this study that stapled technique of haemorrhoidectomy reduced the operative time and postoperative complications like urinary retention, perineal infection and postoperative bleeding.

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