ORIGINAL ARTICLE

Experience of Stapled Haemorrhoidectomy Operation at Mayo Hospital

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Objective: The aim of study was to assess the outcome of treatment for 3rd and 4th Degree Haemorrhoids by a new surgical procedure- Procedure for Prolapsed Haemorrhoids (PPH) or also known as Stapled Haemorrhoidectomy (SH).

Study Design: A prospective study at West Surgical Unit Mayo Hospital/ King Edward Medical University Lahore was undertaken of 32 patients between Oct.2004 and Jan.2006. The outcome studied were patients' profiles, length of operation, post-operative complications and recurrence.

Resut: A total of 32 patients 13 women (44%) and 19 men (56%) had surgery. The median age was 36 (range 23-64) years. The main indications were bleeding 84.3 percent, heamorrhoidal prolapse with 4th degree were 59.3 percent. The median duration of operation was 19 (15- 34) minutes. Minor complications occur in two patients: bleeding in one and significant postoperative pain in an other patient.

Conclusion: However, this is small study without any long term follow-up but our experience of stapled haemorrhoidectomy confirm it as a safe and effective procedure for prolapsed harmorroids.

Key Words: Stapled Haemorrhoidectomy (SH), Haemorrhoids, Post-Operative Complications, Procedure for Prolapse Haemorrhoids (PPH).

INTRODUCTION

Haemorrhoids, "Piles", represent a fragmentation of Park's ligament; this results in submucosal tissue that lines the anal canal, along with the anal mucosa, sliding downward. This prolapse obstructs venous outflow hence causing the clinical entity known as Haemorrhoids (Thomson WHF). Haemorrhoids should be taken to describe symptoms originate from the anal cushion. They are classified depending upon severity into four degrees. First Degree haemorrhoid bleeds but not prolapse. Second degree Haemorrhoids prolapse usually on defaecation but return to anal canal spontaneously. Third degree haemorrhoids require digital replacement and fourth degree haemorrhoids consist of fixed prolapse of tissue that can not be digitally replaced. The anal cushion cause symptoms including discomforts, itching, mucous discharge and bleeding as well as prolapse itself which may cause the patient some distress.

Treatment for stage 1 and II degree haemorrhoids involve attention to bowel habits and avoidance of straining. In addition, non surgical interventions have been described including injection sclerotherapy, rubber band ligation, infra-red coagulation and cryotherapy. The optimum treatment of III and IV degree haemorrhoids is to be surgical haemorrhoidectoym apart from duplex guided ligation of haemorrhoidal vessels. This procedure involves excision of the haemorrhoidal cushions with or without closure of the resulting wound. Stapled haemorrhoidectomy (SH) or Procedure for Prolapse Haemorrhoids (PPH) was presented as a novel technique for the treatment of prolapsing haemorrhoid by Autonio Longo in 1998. This procedure uses a intra-luminal circular stapling gun to excise a circumferential ring of the mucosa from the upper anal canal.

This trial was conducted to study patients's profiles, length of hospital stay, post-operative complications and recurrence.

PATENTS AND METHODS

Between Oct.2004 and Jan.2006 47 patients with 3rd and 4th degree (18 and 29 respectively) haemorrhoids were seen. 32 patients were eventually enrolled in the study.

Patients with previous haemorrhoidal surgery (4 Patients), Patients with contraindication for general anaesthesia (3 patients), and 8 patients did not accept the treatment were excluded from the study.

Bleeding per rectum was the most common presentation (84.3 percent), other symptoms include pain 13 patients (40.6 percent), discharge (34.4 percent), distress and pruritis (53.1%) and (43.7%) respectively.

All patient underwent preoperative PR, Proctoscopy and Simoidoscopy examination. All the patients were operated on under general anaesthesia. The operative field was ahaved and cleaned with antiseptic povidone-iodine solution.

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Stapled Haemorrhoidectomy (SH) was presented as a novel technique and one of the most studied of all recent new surgical technologies (Andrew Hill et al) for the treatment of prolapsing haemorrhoids.

This procedure uses a intra-luminal circular stapling gun to excise a circumferential ring of mucosa from the upper anal canal. The technique involves placing a purse string about 3.5 cms above the dentate line and stapling gun introduce into the anus. The suture is tightened onto the shaft of stapler, the gun then tightened down and fired, releasing a double row of titanium staples through the tissue. The circular knife within the head of the gun excises this redundant tissue as a donut of rectal mucosa. The post-operative complications :(infection, sepsis and perianal oedema), pain, bleeding, and recurrence were recorded.

Post Operative pain was assessed according to Visual Analague Scale (VSA) from 0 (no pain) to 10 (worst pain) on the first operative day. Most patients were discharged when parental analgesia was no more required. The patients were seen one week and one month after surgery and the every three months for at least 15 months to record any recurrence.

RESULT

Among 32 patients 19 male and 13 female with a mean age of 36 (23-64) years. Median follow up 15 (14-27) months. The mean hospital stay was 1.02 days. The median operation time was 18 (15-37) minutes. The main indications were bleeding (84.3%), haemorrhoid prolapse with 4th degree in 19 (59.3%) patients having thrombosis in 3 (9.3%) patients.

Minor complications occurred in 9.3 percent of patients: Acute retention of urine in one patient, bleeding in one patient (3.1%), and significant post-operative pain Visual Analague Score (VAS) of 7.5 requiring prolong hospital stay of 3 days.

Post-operative pain were significantly lower having VAS Score of less than 2 (0.2-7.5) and need only Tab. Paracetamole to control the pain on first 24 hours in 31 (96.8%), one patient (3.1%) need narcotic analgesic to control the pain with VAS Score of 7.5 in first two days postoperatively. The lower pain VAS Score in 96.8 % patients was presumably due to local infiltration of anal region with 0.25% Bupvicain with Adrenalin. Similar results have been noted in the studies of Longo A et al, Ho YH et al and Molloy JR et al. But St Mark's Group showed high pain VAS Score to the level that they abandoned the trial as 46% of the patients experience urgency and rectal pain need narcotic analgesic for 7 to 10 prematurely days. However, reason of this high morbidity due to pain evaluated by senior colorectal surgeon could find no apparent reason for the symptoms.

Table I: Post-Operative Pain by Visual Analague Score VAS n=32

Days	n=1	n=31
1st Day	7.5(5-8)	2.1(0.2-3)
2nd Day	5(3-7)	1.2(0.1-2)
7th Day	1.5(1-2.5)	0(0)

One patient (3.1%) developed urinary retention on the day of surgery and was cahtetrized for 24 hours. Some Oedema of perianal skin was noted in 2 patients. Bleeding from stapler anastomotic site noticed at the end of procedure in one patient and bleeding site was under-run with 2/0 C/Catgut. Minor post-operative complications are shown in Table II.

Post-operative follow-up at one month showed significant resolve the problems of patients regarding bleeding, perianal discomfort, pain and itching. However, 3 patients (9.3%) who had 4th Degree haemorrhoids with thrombosis have a feeling of something in the anal region without any other subjective feeling. At three months follow-up all 32 patients were satisfied with the treatment.

Table II: Post-Operative Complications

Pain of significant	3.1%
Urine retention	3.1%
Bleeding at anastomotic site	3.1%
Peri-anal Oedema	6.2%

Table III: Pre-Operative Presentation in our patients n=32

Symptoms	=n	%age
Bleeding per Rectum	28	87.5
Prolapse Haemorrhoids:	32	
3rd Degree	13	40.6
4th Degree	16	50.0
4th Degree with thrombosis	03	9.3
Peri-anal Discharge	13	40.6
Patients feeling discomfort	22	60.8

DISCUSSION

Many studies have looked at the efficacy and safety of PPH [Procedure for Prolapsed Haemorrhoids] procedure, (Longo A et al, MacRae HM et al, Pavlidis T et al, Wong L Y et al, Sajid Sh et al, Lloyd D et al). Over all, however, the procedure seem safe and well tolerated and appear to be effective, at least in short term (Andrew Hill et al).

The analysis of postoperative complications in our study showed pain VAS scores 0f 2.1 (0.2-8) which is comparable with Thomson WHF et al, Roswell M et al and Ho YH et al. However, one

Patient had severe anal pain needed narcotic analgesic foe three days and remained admitted in hospital. On evaluation by senior consultant we are unable to find the cause of this severe pain.

One patient had bleeding from stapler anastomotic site post-operatively and manage by under-running catgut 2/0 suture. Bleeding is an occasional happening with 0.7 to 5 percent reported in different trial (Johannsson HO et al, Palimento D et al, Cheetham MJ and Sutherland LM et al.When purse string suture are not properly made and donut is not complete on examination one should look more carefully for bleeding points. In our case the bleeding was found at 3 O, clock position.

Majority of the patients (96.9%) were discharge within 24 hours. However, one patient who had severe anal pain after PPH remain admitted in hospital for three days. So stapler haemorrhoidectomy for prolapse haemorrhoids may be used as a day case surgery as shown in the study of Beattie GC et al with 87.3% successful rate.

Three patients who had 4th degree thrombosed haemorrhoids were not satisfied with PPH at one month follow-up as they complained something in anal region without any other subjective complaints. At three months, however, follow-up these three patients were satisfied with the treatment. Probably PPH is not the answer for all haemorrhoids, (Andrew Hill et al), especially those that are externally large or are associated with a very significant external component and thrombosed.

The different studies (Mehigan BJ et al, Ganio E et al, Rouse P et al and Roswell M et al) reported that patients undergoing a stapler haemorrhoidectomy experience a short anesthesia time median 18 minutes which is not comparable with present study where median anesthesia time was about 35 minutes. This difference might be due to better equipped post-op recovery facilities in other hospital.

CONCLUSION

Despite that this study is of small size and limited follow-up, it showed the same essential finding as shown by different trials in the world about outcome of PPH. These are that the Staple Haemorrhoidectomy is easy and quick to perform. In addition it is clearly less painful than the traditional excision haemorrhoidectomy although it is not pain free.

Clearly long-term results as well as scientifically valid economic analysis should be awaited before the wide spread introduction of this technique particularly in patients with poor socioeconomic conditions.

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