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STAPLED HAEMORRHOIDOPEXY: OUR EXPERIENCE

General Surgery

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ABSTRACT

Introduction: Haemorrhoidal disease is a very common condition associated with enlargement and distal displacement of the normal anal cushions

Aim: The aim of this study was to identify ease of procedure, immediate complications, long-term outcomes and patient satisfaction of Stapled Haemorrhoidopexy

Materials and Methods: A total of hundred and fifty (n=150) patients underwent Stapled Haemorrhoidopexy by our surgical unit between January 2012 and December 2016. Feasibility of procedure, operating time and post-operative complications were noted. Follow ups for anal stenosis, recurrence and patient satisfaction were recorded and analyzed

Conclusion: Stapled haemorrhoidopexy is a safe and effective procedure for symptomatic Grade II to Grade IV haemorrhoids, in experienced hands. Proper technique and early recognition of complications and their management is necessary to obtain optimal results.

KEYWORDS

Symptomatic Haemorrhoids, Haemorrhoidal Grades, Stapled Haemorrhoidopexy, Minimal Access Surgery

INTRODUCTION:

Hemorrhoidal disease affects people across the world and represents a very common condition associated with enlargement and distal displacement of the normal anal cushions. They represent a major medical and socioeconomic problem. Large numbers of patients are asymptomatic and painless bleeding is the most frequent presenting symptom.[1]

In our country, since alternative methods of medicine are available and patients like to avoid surgery and get treated by other methods frequently, hence many times they come with late presentations.
Hemorrhoids have a prevalence rate of up to 44% within the general population.[2] They are further graded based on their appearance and degree of prolapse, known as Goligher's classification (Grade I to grade IV) [3]

The treatment of hemorrhoids ranges from dietary and lifestyle modification to radical surgery, depending on degree and severity of symptoms. A major drawback of open hemorrhoidectomy is postoperative pain.[4]

Dr Longo was first to report stapled haemorrhoidopexy, in 1998.[5] The procedure has been widely used for the treatment of patients with hemorrhoids and can restore a haemorrhoidal cushion. This surgical technique has been shown to be a safe and effective procedure that has several advantages, such as no open wound, less pain, less discharge, ease of performance, and early return to normal activities.[6,7] Studies have shown that patients undergoing stapled hemorrhoidopexy have more satisfaction and better quality of life than the conventional open method.[8]

Herein we report our experience (2012 – 2016) with Stapled Hemorrhoidopexy in the treatment of consecutive 150 cases of hemorrhoids.

AIM:

The aim of this study was to identify ease of procedure, immediate complications, long-term outcomes and patient satisfaction of Stapled Hemorrhoidopexy.

MATERIALS AND METHODS:

A total of hundred and fifty (n=150) consecutive patients underwent Stapled Hemorrhoidopexy by our surgical unit between January 2012 and December 2016. Detailed clinical history was taken in all the patents according to definite Performa. All patients with symptomatic grade II-IV haemorrhoids not responding to conservative management were included in the study. Grade II patients were included only if presented with frequent bleeding. The patients were graded on the basis of Goligher grading system,[9] involving history and objective findings.

Exclusion criteria were patients not fit for anesthesia, having associated perianal abscess and fistula.

All the patients were examined clinically (digital rectal examination and proctoscopy), patients below 40 years of age underwent limited sigmoidoscopy and patients above 40 years of age underwent complete colonoscopy. Male patients also underwent ultrasound abdomen to assess prostate status and to rule out abdominal wall hernias. Routine blood investigations and pre anesthesia evaluation was done in all the patients.

Patients were explained the procedure in detail and informed written consent was taken. The patients were given dulcolax tablets (Bisacodyl) previous night and were kept fasting after midnight. Early morning, a few hours before the procedure the patients were given a low enema to remove solid feces and for a better view during operation. Prophylactic IV antibiotic was given in all the patients half an hour before shifting to operation room. All the male patients were catheterized before the procedure.

Spinal anesthesia with or without sedation was used in all the patients. All the patients were placed in lithotomy position and betadine (povidine iodine) preparation was done. Examination under anesthesia performed, findings confirmed and manual anal dilatation was done. 33mm EEA autosuture was used in all the patients. Circular anal dilator with plastic anoscope and obturator were simultaneously introduced in to the anal canal. Obturator was then removed and circular anal dilator fixed externally to the skin with four 2-0 silk sutures. The position of hemorrhoids and dentate line was confirmed. Prolene 1-0 suture was taken 2 – 3 cms above the dentate line. Care was taken to include only mucosa and submucosa. The markings on the anoscope assisted in taking the stitch in the correct place. Starting from six o'clock position a purse string suture was taken. After each bite the anoscope was removed and rotated and re inserted for the next bite to get a circumferential stitch. This avoided rolling up of the mucosa. Inserting a finger beyond the stitch and tightening the suture checked the purse string suture. Anvil was then introduced beyond the stitch and the suture was knotted around the base of anvil. The needle of the suture was then passed through the perforations on the anvil and another knot

tied. The ends of suture were then divided. Stapler gun was then fixed to the anvil with a click sound and slowly tightened while aligning to anal canal. When the gun came into the firing range (a green marker on the gun), it was held for 60 seconds in the same position. After 60 seconds the lock on the gun was released and stapler fired and closure maintained for 30 seconds. The silk sutures on the circular anal dilator were cut; stapler gun was released (opened) anticlockwise for one and half rotations and altogether slowly removed from anal canal. Hemorrhoidal donut was confirmed and sent for histopathology.

The stapler line was checked for bleeding and if any was stopped, either with an absorbable suture or bipolar cautery. Along with stapler hemorrhoidopexy following procedures were performed in some cases - 1) Excision of external skin tags using diathermy 2) Suture Hemorrhoidopexy with absorbable suture, of the haemorrhoidal mass that doesn't get pulled up and 3) Excision of thrombosed pile. An adrenaline gauze was then placed into the anal canal.

The patients were mobilized the same day. Visual analogue score was evaluated at 6 hours and 24 hours. The oral feeding was resumed same day with normal diet after 6 hours of surgery. The patients were mobilized on the same day. On the first postoperative day the patients were sent home after removing catheter and anal pack. After discharge all patients were put on high fiber diet and 3 weeks course of Daflon (Hespridin and diosmin).

Feasibility of procedure, operating time and post-operative complications were noted. Follow-ups for anal stenosis, recurrence and patient satisfaction(at 2 weeks, 3 months, 6 months and 24 months) were recorded (patient performa at every follow up) and analyzed.

RESULTS:

A total of hundred (n=150) patients, including 85 men and 65 women, with median age of 46 years underwent Stapled Hemorrhoidopexy.

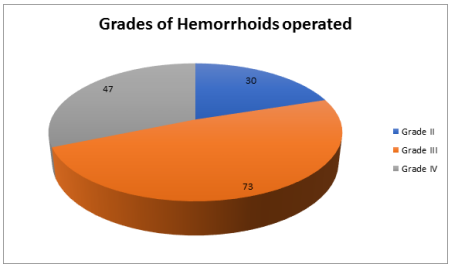
The median Body Mass Index (BMI) was 26 (range 20 - 40). (Table I)

TABLE I: Demographic data

Parameter	Sex	Age	BMI (Body Mass Index)
	Male Female	20-30 31-40 41-50 51-60 61-70	20-25 26-30 31-35
Number (n=150)	85 65	15 25 70 30 10	55 75 20
Median		46	26

The Grades of haemorrhoids operated were 30 Grade II, 73 Grade III and 47 Grade IV Haemorrhoids. (Graph I)

GRAPH I: Grades of hernia operated



Different procedures performed along with stapled hemorrhoidopexy were - 1) Excision of external skin tags in thirty (30) patients 2) Suture Hemorrhoidopexy of the haemorrhoidal mass that didn't get pulled up in thirteen (13) patients and 3) Excision of thrombosed pile in seventeen(17) patients. (Table II)

TABLE II: Procedures performed along with Stapled Hemorrhoidopexy

Procedures	Numbers
Excision of external skin tags	30
Suture hemorrhoidopexy of the hemorhoidal mass that didn't get pulled up	13
Excision of thrombosed pile	17

The median operating time was 35 mins (30 – 45 mins).

Visual analogue score for pain (VAS) was median 2 (Range 0-4) at 24 hours. 6 patients required analgesic for 48 hours, due to lower stapler line. The average hospital stays was1-2 days. The average getting back to work was 5-6 days.

5 male patients had urinary retention after removal of catheter and were re catheterized and put on medications. 2 patients had anal stenosis after 6 months, and were treated with anal dilatation. 1 patient had recurrence after 2 years, was again treated with stapled hemorrhoidopexy. Average patients satisfaction at the end of every follow up was 9/10.

DISCUSSION:

Hemorrhoids are one of the most common anorectal diseases affecting the general population. It is associated with constipation and straining while passing stools.[10]

Conservative or medical management includes dietary modifications like high fiber diet and increased water intake, avoiding straining during passing stools (using stool softeners), sitz bath and topical preparations for local application.[11]

The other treatment options include rubber band ligation, infrared photocoagulation, cryotherapy, laser therapy, conventional excisional hemorrhoidectomy, hemorrhoidal artery ligation and stapled hemorrhoidopexy.

Studies have shown that open hemorrhoidectomy (Milligan-Morgan hemorrhoidectomy) has better success rates than other procedures. However, open wound with precise dressings, prolonged recovery and pain are the main complications of open surgery.[12]

Dr Longo was the first to develop stapled hemorrhoidopexy, which involved relocation of anal cushions and interruption of the feeding arteries. Studies show that advantages of stapled hemorrhoidopexy are reduced operating time, no or very low post-operative pain, early return to work and greater patient satisfaction. [13,14,15]

Stapled hemorrhoidopexy is expensive due to the cost of stapler and not many patients can afford the initial expenditure. However, the early recovery and return to work makes the over all cost comparable to open surgery. In our study, most patients got back to work within 5-6 days as compared to those after open surgery 3-4 weeks as reported in literature.[16]

Many studies have been recently suggesting that stapled hemorrhoidopexy has higher recurrence rates than conventional haemorrhoidectomy.[17,18,19]

The other reported complications of stapled hemorrhoidopexy are bleeding, staple line haematoma, presacral haematoma, rectovaginal fistula, perineal sepsis, rectal necrosis, deficient staple line, rectal perforation and complete obliteration of the rectal lumen.[20,21]

However, in our study we haven't experienced such major complications. Our technique is standardized. We believe that the complications related to stapled hemorrhoidopexy maybe related to the technique. As suggested in literature, our purse string suture was 2-3 cms proximal to the dentate line and not involving the muscle layer. [22] Proper technique helps in reducing possible complications.[23]

Stapled hemorrhoidopexy is reported to be safe and show higher patient satisfaction.[24] In a prospective study of 1144 patients by Volgtsberger et al,[25] the recurrence rate was reported to be only 4%.

Conclusion:

Stapled haemorrhoidopexy is a safe and effective procedure for symptomatic Grade II to Grade IV haemorrhoids, in experienced hands. Proper technique and early recognition of complications and their management is necessary to obtain optimal results. Further understanding of anal anatomy and long term comparative studies are required to standardize this technique for treatment of Hemorrhoids.

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