

Stapled Haemorrhoidopexy, As A Day Case Procedure

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Objective: To determine the effectiveness of stapled haemorrhoidopexy as a day case procedure.

Study Design: Descriptive case series.

Place and duration of study: South Surgical Unit affiliated with King Edward Medical University, Mayo Hospital Lahore; over the period of 12 months from January to December 2009.

Methodology: A total of 30 patients suffering from late 2nd, 3rd and 4th degree haemorrhoids were selected from outpatient department who were fit for surgery on medical grounds. Informed consent was taken. All the patients underwent stapled haemorrhoidopexy using proximate 33mm circular stapling device (PPH, Ethicon Inc.) by the same team of surgeons who operated on all cases. Patients were observed for 12hrs post operatively for effectiveness of stapled haemorrhoidopexy in terms of post operative pain, using visual analogue scale (VAS), immediate post-operative bleeding, urinary retention, and . Patients were kept in the ward for 12hrs and were monitored according to predefined variables. All the data was entered and analyzed using SPSS version 11.0.

Results: Among 30 patients selected for stapled haemorrhoidopexy, the male to female ratio was 9:1 with mean age of 42.90 ± 11.93. Among all the patients selected 11 (36.7%) had late 2nd degree, 15 (50%) had 3rd degree and 4 (13.3%) had 4th degree haemorrhoids. Overall 26 (86%) patients showed effectiveness of stapled haemorrhoidopexy with minimal manageable complications and were discharged as day case patient.

Conclusion: Our study shows stapled haemorrhoidopexy to be a safe and effective procedure for late 2nd, 3rd and 4th degree haemorrhoids in terms of early mobilization, less post-operative pain & post-operative bleeding making it a successful day case procedure.

Key Words: *Stapled haemorrhoidopexy, PPH, Day case procedure, Prolapsed haemorrhoids.*

Introduction

Haemorrhoids are the hypertrophy of normal vascular cushion located inside the anal canal that normally seals the anal opening and prevent leakage of gas or stool. Haemorrhoids occurs when these anal cushions become engorged or the tissue prolapse into the anal canal due to engorgement of blood vessels and laxity of the surrounding connective tissue.¹

Haemorrhoidal disease is one of the most common anorectal conditions although exact incidence is difficult to determine because many people are reluctant to seek medical advice. Estimates of the proportion of UK population affected range from 4% to 24.5%.²

Haemorrhoids are of two types: internal or external depending upon the location in terms of their presence above or below the dentate line respectively.^{2,4} Internal haemorrhoids are classified, depending on the severity, into four grades although the degree of prolapse may not reflect the severity of patient's symptoms.²

The symptoms include discomfort, itching, mucous discharge, bleeding, pain and prolapse and are associated with a feeling of fullness and incomplete evacuation.⁶

The best possible treatment of third and fourth degree haemorrhoids is haemorrhoidectomy. Most conventional haemorrhoidectomies are performed in one of the two ways.

Milligan Morgan technique (open method) as the wound is left open or Ferguson technique (closed method) in which wound is stitched.^{7,8}

Traditional open technique leaves large raw area/ wounds which are difficult to manage and is associated with severe post operative pain and bleeding. It is also associated with complications like wound infections, oedema, major short-term incontinence and urinary retention⁸ Thus increasing morbidity and patient discomfort.

The technique of stapled haemorrhoidopexy (procedure for prolapsed haemorrhoids (PPH), which utilizes a purpose designed stapling gun (Ethicon Inc.) was first described by Longo in 1998 as an alternative to conventional excisional haemorrhoidectomy.^{8,9} Stapled haemorrhoidopexy, is a new and innovative surgical technique for the treatment of late 2nd, 3rd degree/ prolapsed haemorrhoids, has rapidly evolved and become the procedure of choice for primarily internal haemorrhoids.¹⁰

In PPH, the ring of mucosa is excised proximal to the haemorrhoidal mass above the dentate line leaving no external wounds⁸

Thus, stapled haemorrhoidopexy can be regarded as a better procedure as compared to traditional haemorrhoidectomy.^{11,12} There is decreased postoperative pain thus also less urinary retention. Immediate post-operative bleed is

also decreased. Patient can be mobilized early.^{12,13} This procedure is better tolerated in term of recovery and higher compliance as a day case procedure.¹⁴

Due to this benefit, our aim was to conduct a study for evaluation of stapled haemorrhoidopexy as a day case procedure in our setup.

Materials and Methods

A descriptive case series study was conducted in South Surgical Unit affiliated with King Edward Medical University/Mayo Hospital, Lahore from January to December 2009 over a period of 12 months. The study included 30 patients suffering from haemorrhoids selected through Out Patient Department (OPD).

All adult patients between age 20 to 70 from either gender suffering from late 2nd, 3rd and 4th degree haemorrhoids falling in ASA (American College of Anaesthesiologist) Grade I and II were included in our study. Patients who were suffering from thrombosed or strangulated haemorrhoids on clinical examination, or having prior haemorrhoidectomy or concurrent anal pathology (e.g. anal fissure, fistula) were excluded from the study.

Informed consent was taken after explaining the nature of study, risk/benefit ratio and operative procedure to the patient. Base line investigations like complete blood count, random blood sugar, X-ray chest and ECG (where needed) and fitness for anaesthesia was done prior to admission. Patients were called on the day of surgery at 7am with nil per mouth (NPO) since mid-night and were asked to take klean enema a night before surgery.

Surgical Technique

All patients, under spinal anaesthesia (saddle), underwent stapled haemorrhoidopexy with 33mm proximate circular stapling device in lithotomy position. The device was introduced into the anal canal and a prolene 2/0 purse string suture was applied 4cm above the dentate line which lead to excision of ring of mucosa proximal to haemorrhoids causing interruption of blood supply to haemorrhoids and reduction of the prolapse, but maintaining the continuity of rectal mucosa.

Post operatively patients were observed for 12 hrs and post operative variables were noted and effectiveness of the entire procedure was determined by these variables.

The effectiveness was defined as patients who were discharged within 12hrs postoperatively fulfilling the criteria of passing urine in < 12 hrs, no persistent post operative bleeding, no/mild post operative pain (0-3) using visual analogue scale only requiring oral analgesia (if needed).

Patients who had post operative complications like urinary retention, post operative pain and bleeding were kept in ward for further observation and treatment if needed.

Patients were discharged on antibiotics (Ciprofloxacin and Metronidazole), oral NSAID (on SOS basis) and stool softeners.

All the data was entered and analyzed by using SPSS version 11.0. The variables like sex and effectiveness of procedure was presented by calculating frequency and percentages. Data was stratified for grades of haemorrhoids and overall effectiveness of the procedure determined.

Results

A total of 30 patients were included over the period of 12 months (January to December 2009) for stapled haemorrhoidopexy.

Out of 30 patients, 27 (88%) were male and 3 (12%) were female. Mean age of patients was 42.90 ± 11.93.

Figure 1 shows the various grade distributions of haemorrhoids. Most of our patients were of third degree haemorrhoids (50%).

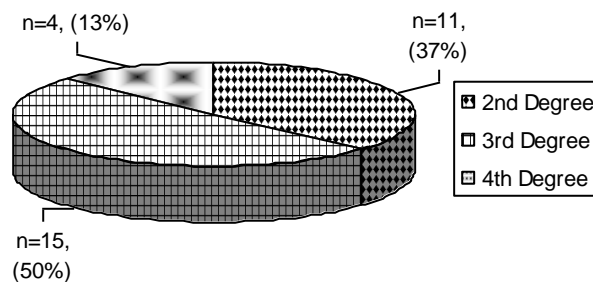


Fig. 1: Grades distribution of haemorrhoids.

Out of 30, 26 (86.6%) showed effectiveness of stapled haemorrhoidopexy as a day case procedure. (Figure 2) All patients of late 2nd degree (100%) were discharged in evening, without any problems. 13 (86.6%) of 15 patients with 3rd degree and 2 (50%) of four of 4th degree were discharged as day case patient (Figure 3).

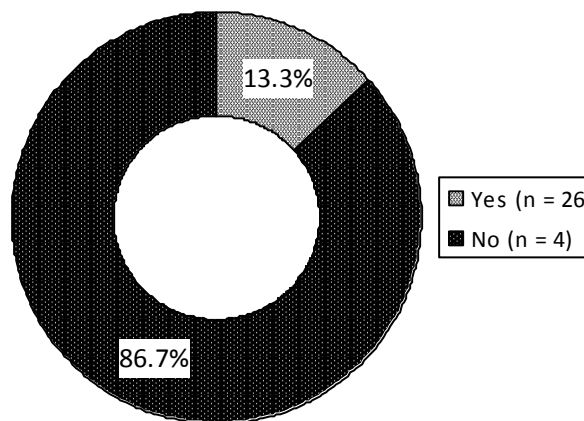


Fig. 2: Overall effectiveness of stapled haemorrhoidopexy.

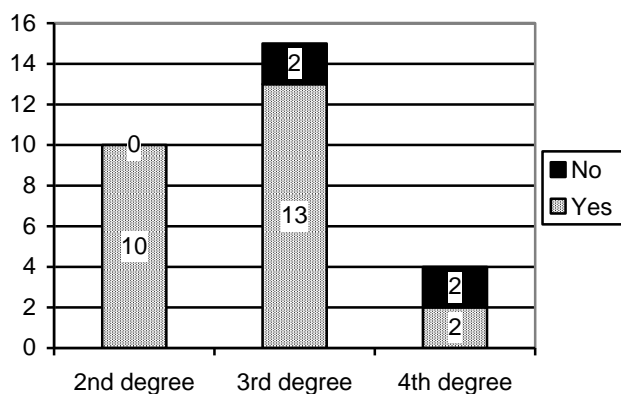


Fig. 3: Effectiveness with respect to Grades.

Four patients (13.3%) were kept overnight due to different reasons. Among them three patient had pain requiring intravenous analgesia (VAS 3+) Two of them developed urinary retention also. One patient required catheterization but other passed urine with use of analgesia. All three required regular analgesia and were kept overnight. One patient had some immediate post-operative bleeding, which settled conservatively but patient was kept overnight.

All of the patients were mobilized with mean (hours to mobilization) 5.90 ± 1.93 (ranging from 3 – 10 hours).

One patient who had 4th degree haemorrhoids was worried about the residual skin tags. He was reassured and was discharged in evening.

Discussion

This study was conducted to determine the effectiveness of stapled haemorrhoidopexy as a day case procedure. A total of 30 patients who underwent stapled haemorrhoidopexy, majority of them showed early post operative mobilization and less post operative complications like urinary retention, postoperative bleeding and pain.

Mean age of patients undergoing the procedure when compared to international and local studies was not significantly different having similar pattern of distribution.^{12,16}

There was a significant difference in gender distribution when compared to international studies. In our study the female to male ratio was 1:9 compared to 1:1 reported by You et al.¹⁷ This difference in gender distribution may be because females are less likely to seek medical attention due to cultural and social factors; unless their symptoms get worse. Due to this reason females present less as compared to males in our setup.

Majority of the patients selected for stapled haemorrhoidopexy had 3rd degree (50%) while rest had late 2nd degree (36.7%) and 4th degree (13.3%).

On reviewing international studies, stapled haemorrhoidopexy have been carried out on 3rd and 4th degree haemorrhoids^{18,19} but in our study we also included late 2nd degree haemorrhoids.

According to this study patients who underwent stapled haemorrhoidopexy had negligible post operative pain and bleeding and similar results were seen in local and international studies.^{14,18,19}

In our study, patients also had early mobilization due to less post operative pain and bleeding which had a direct impact on length of hospital stay and were discharged on day case basis. On reviewing the other studies the results of stapled haemorrhoidopexy in terms of mobilization were not significantly different.^{6,19}

In 4th degree usually there are large external component as well in form of excessive skin tagging. This can be worrying for the patient, as one of our patient complaint, because this is not adequately dealt in the stapling technique. These sorts of large tags needs to be excised separately leaving small wounds which cause less morbidity as compared to conventional technique.

Thus, stapled haemorrhoidopexy can be done as a day case procedure which is supported by Beattie GC et al., Nastro and Nisar.^{14,21,5}

Conclusion

We conclude that procedure for prolapsed haemorrhoids (stapled haemorrhoidopexy) is an effective and promising new technique for prolapsing haemorrhoids and this can be adapted as a day case procedure. It has its benefits of less postoperative pain, immediate postoperative complications, early mobilization and decrease hospital stay. However patient needs to be followed to see the long term benefits against the conventional techniques.

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