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## Lord's procedure prior to stapled haemorrhoidopexy, reduces post operative complications

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### Abstract

**Background:** Acute pain, rectal bleeding and painful defaecation are the common complications of Stapled haemorrhoidopexy. Doing Lord's procedure before stapled haemorrhoidopexy, reduces the risks of complications.

**Material and Methods:** A description of operation technique and demographics of patients are presented.

**Results:** 245 patients of Grade III and Grade IV haemorrhoids were operated (January 2009 and December 2019) by stapled haemorrhoidopexy. Lord's procedure of Manual Anal Dilatation was done in all patients before stapled haemorrhoidopexy. Our series showed complication rate less than 1% as compared to global rate of almost 4-5%.

**Conclusion:** Stapled haemorrhoidopexy like any other surgical procedure is also associated with some post-operative complications. Pain, bleeding and discomfort at defaecation are most common. They occur in about 5% cases. Our study reveals that these complications can be reduced further if Lord's procedure of Manual Anal Dilatation is done just prior to stapled haemorrhoidopexy.

**Keywords:** Anal dilatation, haemorrhoids, haemorrhoidectomy, Lord's procedure, stapled haemorrhoidopexy, post-operative complications

### Introduction

Haemorrhoids are one of the most common sickness a human being suffers from. The first known mention of this disease is from a 1700 BC Egyptian papyrus <sup>[1]</sup>. Morgagni, GB in 1749, attributed haemorrhoids to the erect posture of man <sup>[2]</sup>. Lord described his procedure of anal dilatation in 1968. Stapled haemorrhoidopexy is also known as stapled haemorrhoidectomy. Stapled haemorrhoidopexy is a new and a successful technique to treat haemorrhoids, was developed by Dr. Antonio Longo, Italian Surgeon, in 1998 <sup>[3]</sup>. Stapled haemorrhoidopexy avoids, formation of wound in the operative area, has the advantage of significantly reducing the patients post operative pain <sup>[4]</sup>. It removes abnormally enlarged haemorrhoidal tissues and simultaneously staples the both cut circular edges. It also brings up the remaining tissues to their normal anatomical position, correcting the disturbed anatomy. There is least bleeding and pain post-operatively, as there is no wound left after this operation. The patient can begin walking same day and can gradually increase to normal activities. Recovery after stapled haemorrhoidopexy is much faster than the conventional techniques. Almost all studies, with a few exceptions, also found an early return to work and low post-operative pain <sup>[5, 6]</sup>. Post stapled haemorrhoidopexy pain, bleeding and painful defecation occur in about 5% cases <sup>[7]</sup>. In our series we did Lord's procedure of manual anal dilatation just before stapled haemorrhoidopexy. Post-operative pain, bleeding and painful defecation went down to below 1% of patients.

### Material and Methods

245 patients of haemorrhoid were operated by this technique between Jan 2009 to Jan 2019 in various hospitals of Gurgaon, Haryana. All patients were diagnosed by digital rectal examination (DRE) and proctoscopy as cases of internal haemorrhoids. Only grade III and grade IV internal haemorrhoids were included in this study. Grade I and II haemorrhoids were not included in this series. Informed consent was taken from all the patients. All patients underwent general or spinal anaesthesia. Lord's procedure of anal dilation before stapled haemorrhoidopexy was done in each patient. After stapled haemorrhoidopexy a soft gauze impregnated with povidone-iodine solution and lignocaine jelly was introduced lightly in the

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anal canal, which was removed after 6 hours, post operatively. All patients were prepared by phosphate enema in the morning of the day of surgery. Shaving of perianal area was done on the operation table in the operation theatre.

Out of 245 patients, 200 were men and 45 were women. (Table 1)

**Table 1:** Gender wise distribution

Gender	Number	Percentage
Male	200	81.63%
Female	45	18.37%

(n=245)

Age varied from 21 years to 68 years. Maximum patients (107, 43.67%) belonged to the age group from 31-40 years. (Table 2).

**Table 2:** Age wise distribution

Age	Number	Percentage
21-30	105	42.85%
31-40	107	43.67%
Above 40	33	13.48%

(n=245)

Most of the patients (146, 59.59%) had normal BMI (Table 3)

**Table 3:** Weight wise distribution

BMI	Number of patients	Percentage
18.5-25 (Normal)	146	59.59%
25-30 (Over Weight)	86	35.11%
Above 30 (Obese)	13	5.30%

(n=245)

Only grade III and grade IV haemorrhoid patients were included. Grade IV (133, 54.28%) patients were more than grade III (Table 4)

**Table 4:** Distribution as per Grades of haemorrhoids

Grades of haemorrhoids	Number	Percentage
Grade III	112	45.71%
Grade IV	133	54.29%

(n – 245)

A total of 245 patients of internal haemorrhoids were operated by stapled haemorrhoidopexy technique using a circular stapler. We used PPH03 (Ethicon) in all patients. In every case before starting stapled haemorrhoidopexy operation we did Lord's procedure of manual anal sphincter stretching, by four fingers for four minutes under anaesthesia, index and middle fingers of both hands were used. All four fingers were well lubricated with 2% lignocaine jelly and slowly introduced in anal canal. Right finger pushed towards left side and left fingers towards right side. Anal stretching was done exactly for four minutes by the clock. Then stapled haemorrhoidopexy was performed as per standard protocol.

Patients were called for follow up after 3<sup>rd</sup> post operative day, 7<sup>th</sup> post operative day and then after 2 weeks and then monthly for six months. All patients were told to follow a diet regimen to avoid constipation (plenty of liquids and high fibre diet).

## Results

245 patients were treated with Lord's procedure of anal dilatation and stapled haemorrhoidopexy. Lord's procedure of anal dilatation and stapled haemorrhoidopexy combination was

done in every patient irrespective of their grades of haemorrhoids. Total time taken by this procedure was 35-40 minutes which included 4 minutes of Lord's procedure also. We have no case of postoperative incontinence of faeces or flatus in our series.

**Table 5:** Post operative complications.

Post Operative Complications	Number	Percentage
Pain	3	1.22%
Bleeding	2	0.81%
Painful defaecation	3	1.22%
Urinary retention	2	0.81%

(n – 245)

All patients having post operative pain suffered with mild pain. No one had severe pain. Three patients (1.22%) developed moderate pain after the procedure which remained for 2-3 days and was treated with oral analgesics. Only one patient required injectable analgesic. Postoperative bleeding was mild soakage of the dressing. Two patients (0.81%) had mild bleeding after operation. These patients did not require re-exploration but only change of anal pack stopped the bleeding. Blood loss during and after surgery was minimal. No patient had severe bleeding. Post-operative complications remained around 1%. Three patients (1.22%) developed painful defecation. Two patients (0.81%) in this series developed postoperative acute retention of urine which required catheterization. (Table 5)

**Table 6:** Satisfaction index

Grades of Satisfaction	Number of patients	Percentage
Quite Satisfied	244	99.59%
Satisfied	1	0.41%
Not Satisfied	0	0%

(n=245)

All patients were quite satisfied with the procedure except one (0.41%) who was only satisfied due to his delayed healing (Table 6)

Most of the patients (242) were ambulant on '0' post operative day. All patients stayed only one day in the hospital, discharged the next day. Majority of patients returned to work on 3<sup>rd</sup> to 5<sup>th</sup> post operative day.

## Discussion

A review of 1,107 patients treated with stapled haemorrhoidectomy from twelve Italian coloproctological centers have revealed a 15% (164/1,107) complication rate. Immediate complication (first week) were: severe pain in 5.0% of all patients, bleeding (4.2%), thrombosis (2-3%), urinary retention (1-5%), anastomotic dehiscence (0.5%), fissure (0.20%), perineal intramural haemotoma (0.1%), and submucosal abscess (0.1%).

One multicenter study reported that 36.4% of patients had at least one adverse event following PPH [8]. A systematic review found that 20.2% had postoperative complications [9]. In another study in which PPH was done as day care procedure, 12.7% of patients required re-admission on the day of surgery, mostly due to bleeding, pain and urinary retention [10]. L.J. Porrett et al documented complications of stapled haemorrhoidopexy and wrote that over all early complication rates ranged between 2-3 and 52.5% with the median complication rate being 16.1%, excluding pain. According to Lord, in some cases of haemorrhoids band or bands are felt which give way on anal dilatation. These bands are situated superficially at the anal

orifice, around the anal canal itself or around the lower third of rectum <sup>[11]</sup>. When these bands are relieved it facilitates the insertion of circular stapler, easy and effort less without carrying any injury to anus, and canal and rectum. This is our experience also. Lord's procedure of anal dilatation, if done before stapled haemorrhoidopexy, reduces postoperative complications. Post operative complications such as pain, bleeding painful defecation and urinary retention are reduced to about 1% than universal rate of 5% (Table 5). In our series, no patient developed perianal hematoma or abscess, faecal or flatus incontinence, early recurrence, rectovaginal fistula, severe bleeding, chronic proctalgia, rectal wall haematoma, perforation or pelvic abscesses. It is observed that Lord's procedure of anal dilatation also helps in insertion of stapler in patients with anal canal stenosis also. We recommend, based on our experience, to do routinely Lord's manual anal dilatation before stapled haemorrhoidopexy.

### Conclusions

Lord's procedure of manual anal dilatation if combined with stapled haemorrhoidopexy can reduce certain post-operative complications considerably. Stapled haemorrhoidopexy is a new procedure so all surgeons dealing with it must be well versed with the anatomy of anal canal and rectum and learn it from an experienced surgeon. Lord's procedure of four-finger four minute anal dilatation is also a procedure to be learned as excessive force can lead to faecal incontinence. Lord's procedure with stapled haemorrhoidopexy is a safe (and still relevant) procedure which can further reduce complication rates.

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