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Laparoscopic posterior mesh rectopexy for rectal prolapse: Our experience

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Abstract

Background: Complete rectal prolapse is not only a physical ailment but also has a huge impact on patient's mental and social health. A number of surgical methods have been adopted but all have fair outcomes of recurrences and complications in form of constipation.

Method: Between July 2018 to December 2019 a total of 20 patients presenting with complete rectal prolapse underwent laparoscopic posterior mesh rectopexy in our hospital. In this prospective study we have tried to analyse the outcomes of this novel approach in terms of recurrence, fecal incontinence and constipation.

Result: In the follow up period of 6 months no recurrence was found. Post operative complication was seen in 4 patients as pelvic sepsis and retrograde ejaculation. Fecal incontinence was significantly improved from preoperative baseline. Most of the patients developed a normal bowel habit with acceptable level of constipation.

Conclusion: It can be safely concluded that laparoscopic mesh rectopexy not only has an advantage of it being minimally invasive, it also provides acceptable levels of postoperative results in terms of recurrence, fecal incontinence and constipation as compared to open rectopexy found in other studies.

Keywords: Laparoscopy, mesh, rectopexy

Introduction

Rectal prolapse or procidentia is defined as protrusion of all the layers of the rectal wall through the anal canal [1]. With a plethora of associated symptoms like pain, fecal incontinence, mucus discharge and per anal bleeding the patient suffers a lot physically, mentally as well as socially [2]. Elderly females over 50 years and above have six times more risk of having rectal prolapse than men [3]. Most of these females have a history of some gynecological operations and obstetric complications [4]. Chronically constipated and mentally ill patients have a higher occurrence. Treatment more often is surgical either through abdominal route or through per anal route. Young patients with greater physiological reserve are suitable candidates for surgery. Conservative management is only for frail patients who are unfit for surgery. They are subjected to a combination of bulk laxative and high fiber diet. In our study we have tried to evaluate the outcomes of laparoscopic posterior mesh rectopexy in terms of recurrence, incontinence and constipation.

Methods

Ours was a prospective study. A total of 20 patients who presented with a complete rectal prolapse on outpatient basis in Indira Gandhi Institute of Medical Sciences during a study period of one and half years between July 2018 to December 2019 were included in the study.

Patients aged < 18 years, unfit for surgery due some other co-morbidity or having a history of a previous surgical attempt either through abdominal or per anal route for rectal prolapse were excluded from the study.

Patients were asked to squat and strain in the same manner as they defecate in order to examine the length and thickness of prolapse. Patients with only full thickness rectal prolapsed were included. Patients were thus diagnosed on the basis of history and clinical examination. Morbidity associated like fecal incontinence, bleeding per rectum and anal pain was also assessed.

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All patients underwent preoperative colonoscopy to exclude any intraluminal pathology. All routine investigations were done. Operation – A conventional preoperative bowel preparation and a single dose of broad spectrum antibiotic was given. Patients were catheterized prior to the operation. With patients in

lithotomy position the following port placements were used – 12 mm at umbilicus as camera port and 5mm at right iliac fossa. 5mm at right upper quadrant and another 5mm on the left side at a level just below the umbilicus [Fig.1]



Fig 1: Showing port placement.

After reaching the abdominal cavity an inverted J shaped peritoneal opening was made along posterior-right lateral-anterior side of the rectum. Posterior dissection was performed through retro rectal avascular space. Care was taken to avoid any nerve injury. A Vypro mesh (vicryl and prolene composite

mesh) after cutting in T- shape (fig 2) was introduced in this space and fixed to sacral promontory by absorbable monofilament sutures. The posterior rectal and right lateral mesorectal fascia propria were sutured with the mesh fig 3.



Fig 2: Vypro mesh cut in T- shape.

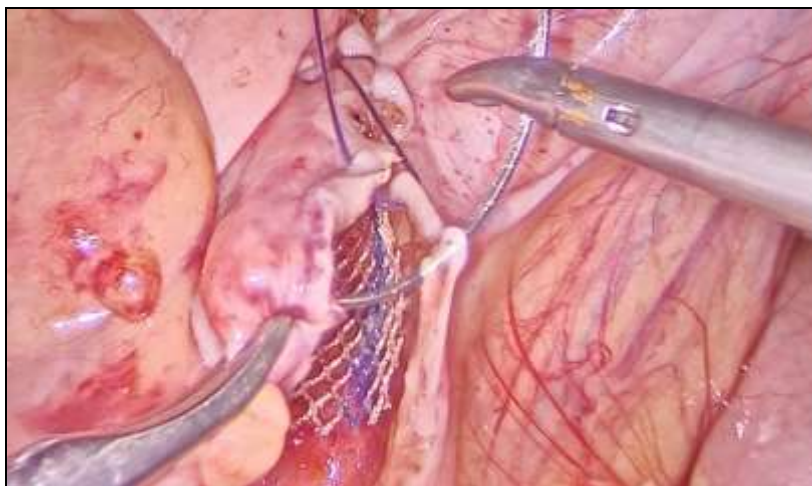


Fig 3: Suturing of right mesorectal fascia propria.

Result

A total of 20 patients were included in the study out of which 13(65%) were female and 7(35%) were male. Most of the patients fell in the age group 51 – 60 and 61 – 70 years (table 1)

Table 1: Age distribution

Age group	Female	Male
18 – 30	2	0
31- 40	2	1
41- 50	2	2
51- 60	4	2
61- 70	3	2

The most common associated presenting symptom was fecal incontinence followed by constipation (Table 2).

Table 2: Presenting associated symptoms.

Symptoms	No. of patients	Percentage
Fecal incontinence	14	70%
Constipation	8	40%
Bleeding per anum	5	25%
Perianal pain	4	20%

Intraoperative or postoperative mortality was zero. Mean length of hospital stay was 5 days. Post operative complication was seen in 4 patients. Two had pelvic sepsis while the other two male patients had retrograde ejaculation. Patients were followed up for 6 months. Recurrence rate of prolapse during the follow-up period was zero. There was either correction or significant improvement in fecal incontinence and quality of life in the six months of follow-up period. 6 out of 8 patients with constipation developed a normal bowel habit with acceptable level of constipation while 2 experienced no significant change postoperatively.

Discussion

Rectal prolapse surgeries through abdominal route are associated with low recurrence rate than perianal route surgeries found in other studies [5, 6]. In our study there was a predominant female population (65%) suffering from rectal prolapse than male population (35%). This is in accordance with other published reports [7, 8]. This may be explained by the fact that most of the females had a history of some gynaecological operations which could have rendered their pelvic floor weak. No gender differences were found with respect to the presenting symptoms.

Rectal prolapsed is a known cause of fecal incontinence. Fecal incontinence was seen in 70% of the sample size which is similar to the findings of much larger studies [8, 9]. Post operative complication rate was 20% in our study which is generally between 1.4 – 47% in other studies [10]. In our study there was a significant reduction in post operative constipation level. D'Hoore *et al.* and the Cochrane review have demonstrated a high incidence in post operative constipation after a posterior mesh rectopexy but most of their inferences were drawn from open abdominal procedures [11]. There are randomised clinical trials which support that in laparoscopic posterior mesh rectopexy incidence of post operative constipation is lesser than in open posterior rectopexy [12]. Sajid *et al.* and Cadeddu *et al.* meta-analysis didn't show any statistical difference in recurrence, incontinence and constipation in patients undergoing either laparoscopic or open rectopexy [13]. But they also preferred laparoscopic rectopexy over open approach citing lack of large scale randomized trials.

Conclusion

Laparoscopic posterior mesh rectopexy is a minimal invasive approach to patients presenting with full thickness rectal prolapse. It has a low complication rate, reduces incontinence significantly and provides acceptable level of post operative constipation and morbidity.

Limitations

Our study group comprised of small sample size of 20 patients. Large scale randomized trials comprising of a large sample size taken from high volume centre could provide a better understanding to the outcomes of this approach. Also our follow up period of 6 months was too short to evaluate the recurrence rate as the largest number of recurrences occur within 12 months of operation [15].

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