

OUR EXPERIENCE WITH USE OF POSTERIOR MESH RECTOPEXY IN COMPLETE RECTAL PROLAPSE

Sudhansu Sekhar Mohanty¹, Panchanan Panigrahy², Bismaya Kumar Rout³

¹Associate Professor, Department of General Surgery, MKCG Medical College, Berhampur.

²Junior Resident, Department of General Surgery, MKCG Medical College, Berhampur.

³Senior Resident, Department of General Surgery, MKCG Medical College, Berhampur.

ABSTRACT

BACKGROUND

Mesh rectopexy is one of the accepted treatment options for rectal prolapse. We used polypropylene posterior mesh rectopexy for prolapse rectum. The aim of the study was to see demographic, clinical and functional outcome of posterior mesh rectopexy in our setup.

MATERIALS AND METHODS

The case report of 33 patients under gone posterior abdominal mesh rectopexy in MKCG medical college and hospital from 1st July 2012 to 1st July 2017 were reviewed retrospectively and the patients were followed up in surgical OPD/telephonic questionnaire. All patients had undergone standard posterior abdominal mesh rectopexy without the division of lateral ligaments with utmost care for prevention of bleeding and nerve damage.

RESULTS

Out of 33 cases of abdominal rectopexy, 12 (36%) were males and 21 (64%) were females. 27 (82%) were within 61-80 years of age group. The most common symptoms were mass per annum (100%) followed by incontinence for liquid stool and flatus 24 (72%). There was no operative mortality. The average hospital stay 7.8 days (5-11 days). The constipation ($p=0.019$) and incontinence ($p=0.0165$) were better postoperatively. There was 1 (3%) partial recurrence of rectal prolapse in 91-year-old lady in 2 years follow up.

CONCLUSION

The recurrence rate as well as clinical and functional outcome of open abdominal mesh rectopexy seems to be satisfactory, however, long-term effect has to be seen.

KEYWORDS

Rectal Prolapse, Mesh Rectopexy.

HOW TO CITE THIS ARTICLE: Mohanty SS, Panigrahy P, Rout BK. Our experience with use of posterior mesh rectopexy in complete rectal prolapse. J. Evid. Based Med. Healthc. 2017; 4(93), 5689-5691. DOI: 10.18410/jebmh/2017/1142

BACKGROUND

Total or complete rectal prolapse is the circumferential full-thickness protrusion of the rectal wall through the anus.¹ The cause of the disease is unknown, but anatomical disturbances are commonly found in patients with total rectal prolapse. These are a straight rectum, a lack of fascial attachments of the rectum against the sacrum, a redundant sigmoid colon, a diastasis of the levator ani, an abnormally deep Douglas pouch and a patulous anus.² Full-thickness rectal prolapse can affect men and women of any age. However, it is more common in women reflecting the fact that obstetric injuries are its most common cause.³ The impact on the quality of life can be very severe. Patients with

total rectal prolapse present with a lump at the anal verge, typically after defecation, which may reduce spontaneously or require reduction by digital pressure. This should be distinguished from other causes of a lump, such as mucosal prolapse or haemorrhoids. Many patients report fecal incontinence, which can be passive incontinence, urge incontinence or mucus discharge (soiling). Total rectal prolapse may also cause pain, ulceration and bleeding,⁴ incarceration⁵ and even gangrene. Patients may report a history of slow transit constipation and/or obstructed defecation syndrome, which is typically characterised by a sensation of incomplete evacuation or of a blockage, hard stools, the need to digitate vaginally, anally or perianally, straining, repeated (often unsuccessful) visits to the toilet and anorectal heaviness or even pain bringing up the problem of a past history of internal rectal prolapse.

MATERIALS AND METHODS

The medical records of 33 patients operated in different health institution of Berhampur for open abdominal mesh rectopexy from July 1, 2012, to July 1, 2017, were reviewed retrospectively. The four patients who could not be followed up were excluded from the study. All patients had

Financial or Other, Competing Interest: None.
Submission 17-11-2017, Peer Review 25-11-2017,
Acceptance 01-12-2017, Published 07-12-2017.

Corresponding Author:

Dr. Panchanana Panigrahy,
S/o. Subas Chandra Panigrahy,
RamaKrishna Nagar 2nd Lane,
Berhampur, District Ganjam-760001, Odisha.
E-mail: contactpancha@gmail.com
DOI: 10.18410/jebmh/2017/1142



mechanical and bacteriological bowel preparation 24 hours prior to operation. Preoperative assessment included clinical examination and colonoscopy. Anorectal manometry was performed to evaluate patients with constipation or faecal incontinence. All patients were given oral mechanical bowel preparation from 1 day before surgery and were on only plain liquids till the night before surgery. All patients had undergone standard abdominal mesh rectopexy without the division of lateral ligaments with utmost care in preventing bleeding and autonomic neuronal damage. The exclusion criteria for operation were age below 20 years, perineal procedures, recurrent prolapse, high ASA score (3 and above), Wexner constipation score (15 and above), D grade Park's Browning classification for incontinence. The patients were followed up in surgical OPD/telephone questionnaire when possible. The data was analysed statistically with the help of online SISA calculator and P value was calculated.

Operative Procedure

The rectum adequately approached through a Pfannenstiel incision as the sigmoid is redundant with the use either of general or epidural anaesthesia. Rectal mobilisation is carried out in the standard manner extending to the level of the pelvic floor with close dissection of the rectum at the level of the lateral ligaments, which we routinely proceed. This is most easily performed in the mesorectal plane as for nerve-preserving Total Mesorectal Excision (TME). Anterior dissection is carried out through the fascia of Denonvilliers. Mesh is fixed to the mid sacrum with suturing to the presacral space by the use of four sutures of 2-0 polypropylene. Great care was adopted not to injure the presacral veins, which may be very troublesome. This is best achieved by a midline suture to the presacral fascia placing the other end of a double-needled suture into the mesorectum. An adequate rectal window is provided by a <270° loose wrap, which admits the finger alongside the rectum between the viscous and the mesh. Latterly, we have only employed suture rectopexy after full rectal mobilisation by suturing the straightened rectum on the stretch to the lumbosacral fascia taking care to avoid any middle sacral artery that maybe present. This has avoided the problem of presacral haemorrhage. The pelvis is routinely drained. We have not employed ancillary procedures such as levator hiatus repair. In our opinion, variations in approach towards standard abdominal rectopexy should be considered for repair in men where full rectal dissection can be difficult. Where this is contemplated, a more limited anterior and lateral dissection is used with nerve preservation if the patient is young because of the real risk of postoperative erectile dysfunction.

RESULTS

Age Group (Years)	Number of Patients
20-30	1
31-40	0
41-50	1
51-60	2
61-70	20

71-80	7
81-90	1
91-100	1
Total (n)	33

Table 1. Age Distribution

ASA Scores	Clinical Status	Number of Patients
1.	A normal healthy patient	27
2.	A patient with mild systemic disease	6
3.	A patient with severe systemic disease	-
4.	A patient with severe systemic disease that is a constant threat to life	-
5.	A moribund patient who is not expected to survive without an operation	-
6.	A declared brain dead patient	-

Table 2. ASA Score of Patients

Almost all patients were fit and healthy or with minor systemic illness.

Sl. No.	Symptoms	Number of Cases	Percentage
1.	Mass per annum	33	100%
2.	Constipation	12	36%
3.	Incontinence	24	72%
4.	Bleeding	10	30%
5.	Mucus discharge	29	87%
6.	Solitary ulcer	1	3%

Table 3. Symptoms of Complete Rectal Prolapse Patients

Almost, all patients had mass per annum as chief complaint making 100%, however, the patients had more than one symptom. There was no mortality.

Sl. No.	Complications	Number of Patients
1.	Retention of urine	5
2.	Bleeding	1
3.	Postoperative ileus	4
4.	Wound dehiscence	1
5.	Chest infection	1
6.	Wound infection	2

Table 4. Immediate Postoperative Complications

All complications resolved during hospital stay. The hospital stay was 5-11 days (mean 8 days). Only one patient of 91 years female developed partial recurrence of rectal prolapse after 1 year. Otherwise, there was no recurrence in short-term follow up (3-24 months).

For the functional outcome, the constipation and incontinence were used and 2 × 2 contingency table was made, the Pearson's Chi-squared test was used and 'p' value calculated (confidence interval 95%) with SISA online statistical calculator.

Sl. No.	Constipation	Preoperative	Postoperative
1.	Yes	12	2
2.	No	21	31
	Total	33	33

Table 5. Constipation

P value <0.019.

Sl. No.	Incontinence	Preoperative	Postoperative
1.	Yes	24	5
2.	No	9	28
	Total	33	33

Table 6. Incontinence

P value <0.0165, recurrence rate- 3%.

DISCUSSION

Rectal prolapse is a socially devastating disease when patients seek medical advice. Surgery remains the treatment of choice. Perineal approaches are reserved for elderly and unfit patients of high anaesthetic risk.^{6,7}

Kaiwa and co-workers after treating 9 elderly patients laparoscopically concluded advanced age is not a contraindication to surgery. The gangrenous or incarcerated rectal prolapse cases were not encountered in our series demanding for Delorme's or Altemeier's operation, however, 3 cases of Thiersch's operations were excluded from the study. One case of 91-year-old female had abdominal rectopexy, but she developed recurrence (3%) after 2 years. These results are consistent with other reports on recurrence after anterior and posterior rectopexy. Yoshioka and co-workers reported a recurrence rate of 1.5% full-thickness rectal prolapse and 7% mucosal prolapse after posterior rectopexy with Marlex mesh attached to the sacrum. Marchal and co-workers reported a 4% recurrence rate 14-276 months after Orr-Loygue rectopexy.⁸ In this series of patients, one of 3 patients experienced a recurrence 14 months after simple rectopexy and one of 12 prolapses (8%) recurred 2 years after resection rectopexy. Molen et al reported 0% recurrence after performing posterior mesh rectopexy in 18 patients in 42 months of follow up. Prospective studies of Galli and Rabbu reported 3% recurrence rate in 37 patients. Similarly, Aitola reported 6% recurrence rate.

Abdominal operation has lower recurrence and better functional outcome than perineal procedures. The use of polyvinyl alcohol has been obsolete because of increased infection rate.⁹ Similarly, Ripstein procedure was blamed for aggravation of constipation. In patients with redundant sigmoid colon along with history of constipation, resection rectopexy seems to be better option as retrograde

autonomic nerve damage occurs after the division of lateral ligaments. The problem of constipation is aggravated postoperatively. The choice of division or preservation of lateral ligaments depends upon surgeon's experience and further study is needed to access its efficacy. Laparoscopic surgery has the advantages of less pain, shorter hospital stay, early recovery and early return to work as compared with laparotomy. Apart from these advantages, the results are similar to those with the open procedures irrespective of the method used (suture, resection or posterior mesh). Therefore, where expertise is available, this approach maybe preferred. Suture and mesh rectopexy are still popular with many surgeons and the choice depends on the surgeon's experience and preference.

CONCLUSION

A myriad of operations have been described as treatment of prolapse rectum. The recurrence rate as well as clinical and functional outcome of open abdominal mesh rectopexy seems to be satisfactory, however, long-term effect has to be seen.

REFERENCES

- [1] Jones OM, Cunningham C, Lindsey I. The assessment and management of rectal prolapse, rectal intussusception, rectocele and enterocele in adults. *BMJ* 2011;342:c7099.
- [2] Varma M, Rafferty J, Buie WD. Practice parameters for the management of rectal prolapse. *Dis Colon Rectum* 2011;54(11):1339-1346.
- [3] Abbott D, Atere-Roberts N, Williams A, et al. Obstetric anal sphincter injury. *BMJ* 2010;341:c3414.
- [4] Tou S, Brown SR, Malik AI, et al. Surgery for complete rectal prolapse in adults. *Cochrane Database Syst Rev* 2008;(4):CD001758.
- [5] Jarry J, Peycru T, Shekher M, et al. An uncommon surgical disease. *JAMA Surg* 2014;149(4):395-396.
- [6] Stavros G, Sotirios B. Rectal prolapse. *Int J Colorectal Dis* 2007;22:231-243.
- [7] Madiba TE, Baig MK, Wexner SD. Surgical management of rectal prolapse. *Arch Surg* 2005;140(1):63-73.
- [8] Aitola PT, Hiltunen KM, Matikainen MJ. Functional results of operative treatment of rectal prolapse over an 11-year period: emphasis on transabdominal approach. *Dis Colon Rectum* 1999;42(5):655-660.
- [9] Roig JV, Buch E, Alós R, et al. Anorectal function in patients with complete rectal prolapse: differences between continent and incontinent individuals. *Rev Esp Enferm Dig* 1998;90(11):794-805.