ABDOMINAL MESH RECTOPEXY: OUR EXPERIENCE AT HAYATABAD MEDICAL COMPLEX PESHAWAR

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ABSTRACT

Background: Complete rectal prolapse is a condition which is equally common in both sexes in adults as well as in children. It is characterized by protrusion of full thickness rectal wall through the anal orifice. Despite its rarity several procedures have been described to correct rectal prolapse. Among the many procedures, abdominal posterior rectopexy has been preferred because of its low recurrence rate.This study was conducted to evaluate the clinical outcome of abdominal mesh rectopexy in our Hospital.

Place and Duration: Surgical A unit Hayatabad Medical Complex Peshawar Pakistan from 1st Sep 2012 to 31ST Aug 2014.

Material and Method: A total of 17 patients,11 male and 6 female with complete rectal prolapse were included in this prospective study. Pre-operative assessment of the patients included, history taking, thorough physical examination, DRE with meticulous assessment of the sphincter tone and colonoscopy. Posterior mesh rectopexy done in all patients using synthetic polypropylene mesh.

Results: Out of the total 17 patients, 5 presented with incontinence and 7 with chronic constipation.Incontinence improved in all 5(100%) patients while 1(5.88%) patient with preexisting constipation complained aggravation and 3 patient(17.64%)developed new onset constipation postoperatively. Bleeding noted in 2(11.7%) of patients. Surgical site infection occurred in 1(5.88%) patient. No recurrence noted after two year follow up.

Conclusion: Abdominal posterior mesh rectopexy is a safe and effective procedure for complete rectal prolapse especially in patients with incontinence. It improves incontinence with a minimal risk of increasing constipation.

Key Words: Rectal prolapse, abdominal rectopexy, mesh rectopexy.

INTRODUCTION

Complete rectal prolapse is the protrusion of circumferential full thickness rectal wall through the anal canal. It is a debilitating condition, which affects both the very young and the elderly. It is frequently associated with faecal incontinence. Descriptions of rectal prolapse dates back to ancient times and is described in Ebers papyrus in 1500 BC[1].

The pathogenesis of this disease is unclear and many theories regarding this have been proposed. Moschcowits suggests that the pathogenesis of rectal prolapse starts with anterior rectal wall herniates through the defect in the pelvic fascia[2]. Broden and Snellman demonstrated with the help of cinedefecography, that rectal prolapse is because of the circumferential intussuseption of the rectum through the anal canal[3].

Over one hundred procedures have been described to treat rectal prolapse, indication of an imperfect understanding of the disorder and absence of an ideal procedure to treat this condition. The procedures for rectal prolapse are broadly divided in to two categories i.e. Abdominal and perineal[4]. In general perineal surgical repairs are associated with less morbidity and mortality but with greater recurrence rate as compared to abdominal procedures. Perineal procedures are therefore reserved for elderly and high risk patients and also in very young as it can be performed under regional anesthesia[5]. This study was aimed at evaluating the results of abdominal posterior mesh rectopexy.

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MATERIAL AND METHODS

This prospective observational study was conducted at surgical unit "A" Hayatabad Medical Complex Peshawar from 1st sept 2012 to 31st Aug 2014 after taking approval from the institution ethical committee. Total no of patients were 17 with 11(64.7%) male and 6(35.29%) female. Age ranged 21- 69 years with a mean age of 45 ± 6yrs. Patients of all age and sex presented with complete rectal prolapse were included. Patients with Recurrent prolapse, patients operated somewhere else and admitted with complications or patients unfit for surgery are excluded from the study.Informed consent taken from all the patients.All the base line investigations done and bowel preparation done in all patients preoperatively. All patients underwent abdominal posterior mesh rectopexy by a single surgeon and assessed for any complication postoperatively and followed up at 6th week, 3 month, 6 month, 1 year and then 1 year after that.

SURGICAL TECHNIQUE

Abdominal Posterior Mesh Rectopexy: Patient is catheterized on the table and placed in the Lloyd Devies position. The rectum is mobilized posteriorly up to the pelvic floor preserving nerves and ureters. Lateral ligaments were preserved in all patients. A pre formed polypropylene mesh is applied in the presacral space and stitched to the sacrum posteriorly with the help of three prolene 2/0 suture. The mesh is than encircled to the 3/4th of the circumference of the rectum and fixed with 2/0 prolene in a seromuscular fashion.

Table 1: Gender Distribution (n=17)

Gender	Number (%)
Male	11 (64.7%)
Female	6 (35.29%)

Table 2: Presenting Symptoms (n=17)

Symptoms	Number (%)
Mass per rectum	17 (100%)
Incontinence	5 (29.41%)
Constipation	7 (41.17%)
Bleeding P/R	1 (5.88%)
Mucous discharge	1 (5.88%)

Table 3: Morbidity (n=17)

Complications	Number (%)
Bleeding	2 (11.7%)
Wound infection	1 (5.88%)
Constipation	2 (17.64%)
Impotence	0 (0%)
Urinary disturbance	0 (0%)
Recurrence	0 (0%)
Aggravation of pre existing constipation	1 (5.88%)

Table 4: Results of Posterior Mesh Rectopexy

AUTHORS	N	RECURRENCE (%)	FOLLOWUP, YEARS
Present study 2014	17	0	2
Morgan et al 1972	150	3.2	NR
Penfold et al 1972	101	3.0	6
Yoshioka et al 1989	165	1.05	3
Novell et al 1994	31	3.2	4
Aitola et al 1999	96	6.0	5.3

RESULTS

A total of 17 patients, 11(64.7%) male and 6(35.29%) female with an age range of 21-69 years and a mean age of 45+_6year were included (Table 1). Mass per rectum was most common presenting symptom occurring in all 17(100%) patients. Constipation in 7(41.17%), Incontinence in 5(29.41%) were next common presenting complaints (Table 2).

No recurrence were found after two years follow up in all the 17 cases underwent abdominal mesh rectopexy. Incontinence recovered after surgery in all the 5(100%) cases presented, while only 3(17.64%) patients developed new onset constipation postoperatively and only 1(5.88%) patient with preexisting constipation had aggravated constipation (Table 3).No mortality noted in this study.

DISCUSSION

The range of surgical options available to treat the rectal prolapse poses the question about the best procedure. However abdominal rectopexy retains the best reputation among surgeons[6].

Rectal prolapse is said to be a disease of elderly females in western literature[7]. We noted a male predominance in our study 11/17(64.7%) male patient as compared to 6/17(35.29%) female. Primary outcome measure in this study was recurrence of full thickness rectal prolapse which is clinically the most relevant measure. Recurrence was defined as the circular protrusion of rectal mucosa through the anal canal and is evaluated by history, clinical examination[8]. Secondary outcomes were morbidity, mortality, length of initial hospital stay, constipation, and fecal incontinence.Traditionally recurrence rate is the most important factor in determining the procedure. Recurrence of 0-12% has been noted in different studies after posterior abdominal mesh rectopexy. In this study we found no recurrence after two years of follow up. A comparison of different studies in terms of recurrence is given in the table4.

Other minor complications noted in this study includes, bleeding 2(11.7%),which was of a minor nature and was due to the stitches taken while fixing the mesh to the sacrum and was controlled by gentle compression for a few minutes. Constipation is the most common complication after abdominal rectopexy[9]. It may occur as new onset constipation post surgery or it may aggravate an already existing constipation postoperatively[10]. We noted 3(17.64) new onset constipation post surgery which was treated with laxatives to the patient satisfaction. While 7(41.17%) patients presented with constipation preoperatively had only 1(5.88%) patient developed aggravated constipation post rectopexy. Incontinence was the initial presentation apart from rectal prolapse in 5 patients and all of them got cured after abdominal rectopexy. No patient developed impotence and urinary disturbance in this study after abdominal

rectopexy. No mortality were noted in this study.

CONCLUSION

Abdominal posterior mesh rectopexy is a safe procedure in patients who can tolerate laparotomy. It has got the lowest or no recurrence rate especially in patients presented with fecal incontinence. Patient improves after surgery regarding incontinence, with a slight risk of constipation post operatively.

LIMITATIONS

Rectal prolapse is not a very common condition hence the size of this non randomized study was very small with a shorter follow up period. A larger randomized study with longer duration of follow up is required to get conclusive evidence.

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