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STUDY OF CLINICAL AND FUNCTIONAL RESULTS OF ABDOMINAL MESH RECTOPEXY FOR COMPLETE RECTAL PROLAPSE

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ABSTRACT **Background and objectives** There are many often confusing, surgical procedures available for treating complete rectal prolapse ranging from complex abdominal interventions to simple rectal procedures with varying results. The ideal procedure suitable in all cases is still an enigma. Many surgeons today believe that abdominal rectopexy has become the operation of choice not only in the young but even in the elderly patients, resulting in a low recurrence rate and restoration of continence in significant number of patients. The present study attempted to evaluate clinical and functional results of abdominal rectopexy using prolene mesh for complete rectal prolapse in our centre.

Methods Thirty patients with complete rectal prolapse underwent abdominal rectopexy using prolene mesh after investigations at Thanjavur medical college during the period from March 2013 to August 2014.. They were followed up for a period of 6 months. Each case was analysed for post operative complications like haemorrhage, operative mortality, wound infection , infection around prolene mesh, bladder and erectile dysfunction. During follow up recurrence of rectal prolapse, changes in bowel frequency, and restoration or detoriation in continence were particularly noted.

Results There were no mortality or recurrence in any patient. There was significant improvement in continence in two patients with incontinence. There was decrease in bowel frequency in 4 patients post operatively but this does not result in clinical constipation in any of the patients. There were no major post operative complications.

Interpretation and conclusion Abdominal rectopexy using prolene mesh is a simple operation with low recurrence rate, good functional outcome with low morbidity and mortality. This procedure can be considered in all patients who are considered fit to undergo an abdominal procedure.

KEYWORDS : Complete rectal prolapse; Abdominal rectopexy; prolene mesh; incontinence; constipation.

Introduction

When an internal organ persists in an endeavour to become an external organ, it generally causes a great deal of trouble. The rectum is occasionally an offender in this respect. W.Ernest Miles, 1993. Complete rectal prolapse is a distressing and demoralising condition. Patients are troubled by a protrusion beyond the anal verge which secretes mucus and may bleed. It is frequently associated with incontinence either because there is an underlying weakness in the sphincter mechanism which allows the prolapse to occur, or because of the presence of the prolapse protruding through the anal canal leads to poor sphincter function.[1,3] The mean age of incidence of rectal prolapse being in the fourth to fifth decades. Complete rectal prolapse is such a problematic condition for which in the past centuary at least 100 operations have been advocated for correction[2,4]. Complete prolapse of the rectum enjoys an enviable reputation for intractability to treatment and additional evidence to this effect provided by the multitude of methods that have been devised for its relief. The most common and successful operations are those that either use a synthetic material to fix the rectum to the sacrum, as described by Ripstein and Lanter and Wells, or those that resect a portion of the rectosigmoid as described by Theuerkauf and others [4,5]. Among abdominal procedures of rectopexy the most frequently used is some form of posterior rectopexy which involves mobilization of the rectum from the sacrum and fixation directly or by use of an artificial material such as Marlex mesh, Ivan sponge or an absorbable mesh such as vicryl. Abdominal rectopexy has a low morbidity and mortality rate.

Aim of the study

1. To study the recurrence and post operative complications of abdominal rectopexy using prolene mesh for complete rectal prolapse.
2. To study the functional results of bowel frequency and incontinence following abdominal rectopexy.

Methodology

This prospective clinical study include 30 cases of complete rectal prolapse who underwent abdominal rectopexy using prolene mesh. These patients were admitted at Thanjavur medical college during the period from March 2013 to August 2014. The patients coming with history of protrusion of mass per anus were interviewed and a diagnosis of complete rectal prolapse was made essentially on clinical examination. For assessing the functional results, continence was classified after Browning and Park's as follows[6]

Table- 1 Classification of rectal prolapse

Grade 1	Fully continent for flatus and stools
Grade 2	Continent for stools but not for flatus
Grade	Incontinent for liquid stools
Grade 4	Incontinent for solid stools

Grade 3 and 4 were considered unacceptable. No distinction was made between occasional and regular episodes of incontinence. For assessing the bowel function , constipation was defined as passage of hard stools with frequency lessthan once a day or marked straining at stools. Fecal frequency was morethan 3 bowel actions a day. Each case was followed up in out patient department once in a month for a minium period of 6 months. Each case was assed clinically for post operative complications like haemorrhage, operative mortality,wound infection,infection around prolene mesh,bladder and erectile dysfunction. During follow up , recurrence of rectal prolapse, effect on bowel frequency and improvement or detoriation of pre-existing incontinence were particularly noted down.

Observations and results

In our study patients ranged in age from 20-60yrs. The overall mean age being 37 yrs. The highest rate of occurrence was seen in the age group of 41-50 yrs. The next age group affected was 31-40 yrs.

Table – 2, No of cases

Age in years	No of cases
21-30	2
31-40	8
41-50	14
51-60	6
Total	30

In our study there were twenty four male patients and six female patients with male female ratio of 4:1. All the female patients were parous and had normal vaginal delivery. The predominant symptoms seen in all our patients were prolapse and mucous discharge from anal

canal for a mean duration of 7 months. The next common symptom was occasional bleeding seen in 18 patients with mean duration of 3 months. Constipation with straining at stools was seen in 8 cases. Only 4 patients had bowel frequency of morethan 3 times per day and two among them had incontinence for liquid stools.

Table – 3, Bowel frequency

Bowel frequency per day	No of cases preop	No of cases post op
Constipation	8	6
1-2 times per day	16	22
2-3 times per day	2	2
More than 3 times per day	4	Nil
Total	30	30

Eight patients had undergone previous anorectal surgery. Haemorr hoidectomy six, Thiersch stitch two. Two female patients had undergone vaginal hysterectomy with pelvic floor repair for uterine prolapse 3 yrs prior to noticing the prolapsed rectum. In our study 12 patients presented with complete prolapse which was manually reducible and there was no ulceration or bleeding. 18 patients has presented with complete prolapse with ulceration and bleeding. There was no cystocele, rectocele or uterine prolapse in female patients. The anal canal was patulous in all cases. On sigmoidoscopy distal proctitis was noticed in 18 cases.

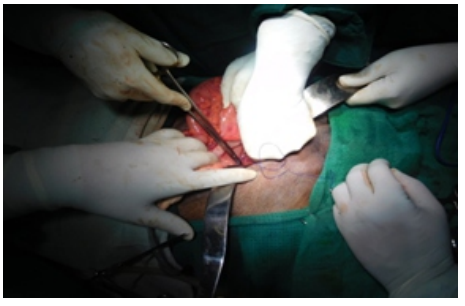

Fig:1,rectal fixation to sacrum

Fig : 2, mesh anchored to rectum

The average duration of operation was 1 hr 30 minutes. There was no mortality in our series. Only two cases had prolonged ileus which resolved on conservative management. There was no recurrence of rectal prolapse either partial or complete for a follow up period of 6 months. Two patients who had incontinence to liquid stools had improvement after rectopexy and was fully continent after surgery.

Discussion

Complete rectal prolapse, a distressing condition is more common in adults than in children. We have seen in our study that this condition is predominantly after the age of 40 nearly in 67% of cases. Women are predominantly affected in west with female to male ratio of 6:1. However in our series there is male preponderance with male to female ratio of 4:1[2,3]. Increase incidence in males is also reported in India and other Asian countries[3]. All the female patients in our series were parous without any evidence of cystocele,rectocele,or uterine prolapse. Disordered bowel habit particularly constipation with straining is considered to be one of the predisposing factors in the etiology of prolapse. In our series constipation was present in 8 cases preoperatively. Incontinence of various grades reported in west ranging from 30%to 80%.in our study only 7% cases had incontinence for liquid stools. Abdominal rectopexy shown by many to produce post operative constipation in 10% to 47% of patients. Hiltuen KM and Matikainen M (1991) found post operative complication in 31% of cases in there series of 54 consecutive marlex mesh abdominal rectopexy. G S Duthie and DCC Bartolo (1992)[9] reported no evidence of significant post operative constipation in there series of 20 patients followed up for a period of 6 months. In our present study 8 patients had constipation with straining preoperatively. The symptom of constipation continued in 6 of them post operatively and it was improved in 2 cases. Those who had constipation was treated with bulk laxatives and was satisfied with treatment. The incidence of restored continence associated with successful abdominal rectopexy is high. G S Duthie and DCC Bartolo reported improved continence in 67% following Marlex mesh abdominal rectopexy [9]. Hiltunen K M and Matikainen M [1991] found improvement in continence in 75%[10]it was observed in our study 7% patients had incontinence to liquid stools, they become fully continent resulting in100% improvement in continence. In our study we didn't encounter any mortality which is comparable with Keighley MRB, Shouler P.J. [7] in their series of 100 cases, Hilsabeck in their series of 17 cases and Notarus [8]in their series of 32 cases. Recurrence found was nil in our study which was comparable with other studies[7].

Conclusion

The abdominal rectopexy using prolene mesh produced no mortality or recurrence in our hands. We have found that this operation is easy to learn and master. There were no significant post operative complications and functional results in the form of incontinence is also excellent. Therefore we concluded that abdominal rectopexy using prolene mesh an ideal operation for complete rectal prolapse for patients who are fit for abdominal procedure.

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