

ANALYSIS ON THE OUTCOMES OF MODIFIED THIERSCH REPAIR AND ABDOMINAL RECTOPEXY FOR COMPLETE RECTAL PROLAPSE IN A TERTIARY CARE CENTRE

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ABSTRACT

BACKGROUND

Rectal prolapse is a condition affecting the patient's personal and social life making them grossly disabled. From time since the disease was diagnosed, many procedures have been advocated in the past for treating rectal prolapse yet the best method is still debatable. So the purpose of our study is to compare the outcomes of two commonly performed procedures i.e. the modified Thiersch and abdominal rectopexy for complete rectal prolapse among the patients admitted to MKCG Medical College, Berhampur.

MATERIALS AND METHODS

Fifty patients with complete rectal prolapse were studied among which 25 patients underwent abdominal rectopexy using Prolene mesh and 25 patients underwent modified Thiersch repair using a Prolene mesh. It is a prospective study conducted from June 2015 to June 2017. They were followed up for a mean period of 7 months. All cases were analysed for postoperative complications like haemorrhage, wound infection, constipation, bladder and erectile dysfunction. During the followup period, recurrence rate, bowel frequency changes and restoration or deterioration in continence were taken into consideration.

RESULTS

The study group included patients from 17 to 88 years, most of them belonged to the age group of 61-70 (28%). Majority of them were male patients 42 (84%) and 8 (16%) were female patients. The patients who underwent abdominal rectopexy had less morbidity, only 1 (4%) patient had constipation and others had improved functional results with a bowel frequency of 1-2/day in 24 (96%) of the patients compared to the modified Thiersch repair where only 11 (44%) patients had an improved bowel frequency, also 8 (32%) had wound infection, 6 (24%) had incontinence, 3 (12%) had constipation, 2 (8%) had bladder dysfunction, 2 (8%) had haemorrhage.

CONCLUSION

Abdominal rectopexy is a better option than the modified Thiersch repair for complete rectal prolapse in patients who are fit to undergo an abdominal procedure.

KEYWORDS

Abdominal Rectopexy, Modified Thiersch, Complete Rectal Prolapse.

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BACKGROUND

Rectal prolapse describes a condition in which the entire layer of the rectal wall protrudes through the anal canal. It is more commonly found in elderly women. Rectal prolapse is classified into two types: Complete or full thickness

prolapse and incomplete or partial thickness prolapse. Complete prolapse represents a protrusion of the entire layer of the rectum to the outside of the anus.

Historically, rectal prolapse was described as early as 1500 BC.¹ Hippocrates described treatment for rectal prolapse: the patients could be treated by hanging them to a tree upside down, applying sodium hydroxide to the mucosa, and fixing for 3 days. In medieval times, other treatments were suggested; rectal prolapse could be prevented by using a scar obtained through burning the anus or by using a stick. In the 20th century, rectal prolapse was studied scientifically, nonetheless, the aetiology and the treatment methods have not yet been established clearly. To date, there are various surgical treatments for rectal prolapse.

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In 1889, Mikulicz first introduced the perineal procedure of amputation of the rectal prolapse from below. The procedure was coined as "rectosigmoidectomy" by Miles in 1939. The original Thiersch operation designed to treat this condition used silver wire gauge, applied around the anal verge subcutaneously using a long large bore hollow needles to help the employment of the silver wire.² The procedure is then modified by the use of a single circle of nylon suture or a ribbon of Dacron.³

In 1965 – Ripstein tried a method of fixing the mobilised rectum to the front of the sacrum with the use of a sling of Teflon mesh using polyvinyl – alcohol (Ivalon) sponge.

Inclusion Criteria

Patients of all age groups and both sexes taking into consideration all consecutive cases who attended OPD and emergency department in MKCG Medical College & Hospital, Berhampur with history and clinical picture suggestive of rectal prolapse.

Exclusion Criteria

1. Patients with provisional diagnosis of mucosal or incomplete rectal prolapse.
2. Cases of complete rectal prolapse where sigmoidectomy or colectomy was combined with abdominal rectopexy.
3. Cases which could not be followed up for a minimum period of 6 months.

MATERIALS AND METHODS

This prospective clinical study included cases of complete rectal prolapse who will undergo either abdominal rectopexy or modified Thiersch repair using Prolene mesh. These patients include those admitted to MKCG Medical College & Hospital, Berhampur during the period from July 2015 to June 2017. The patients coming with a history of protrusion of mass per anus were interviewed and a diagnosis of rectal prolapse was made on clinical examination. For assessing functional results, continence will be classified after Browning and Park’s classification.⁴

Fifty patients with complete rectal prolapse were studied among which 25 patients underwent abdominal rectopexy using Prolene mesh and 25 patients underwent modified Thiersch repair using a Prolene mesh. They were followed up for a mean period of 7 months. All cases were analysed for postoperative complications like haemorrhage, operative mortality, wound infection, infection around Prolene mesh, bladder and erectile dysfunction. In the followup period, recurrence rate, bowel frequency changes and restoration or deterioration in continence were taken into consideration.

Study Design- This is a prospective study.

RESULTS

Age in Years	Number of Cases	Percentage
11-20	2	4
21-30	5	10
31-40	11	22
41-50	5	10
51-60	10	20
61-70	14	28
71-80	2	4
81-90	1	2
Total	50	100

Table 1. Age Distribution

Sex	Number of Cases	Percentage
Male	42	84
Female	8	16
Total	50	100

Table 2. Sex Distribution

Symptoms	Number of Patients	Percentage
Mass PR	50	100
Bleeding PR	23	46
Straining at defaecation	15	30
Mucous discharge	12	24
Loose stools	6	12
Incontinence to stools or flatus	5	10

Table 3. Symptoms

Bowel Frequency Per day	Number of Cases	Percentage
Constipation	5	10
1-2 times per day	29	58
2-3 times per day	14	28
More than 3 times per day	2	4
Total	50	100

Table 4. Bowel Frequency Chart: Preoperative

	Modified Thiersch (Number of Cases = 25)	Abdominal Rectopexy (Number of Cases = 25)
Partial prolapse	4 (16%)	Nil
Complete prolapse	1 (4%)	Nil
Total	5 (20%)	Nil

Table 5. Recurrence of Rectal Prolapse

Complications	Modified Thiersch Number of Patients (%)	Abdominal Rectopexy Number of Patients (%)
Wound/mesh infection	8 (32)	0 (0)
Incontinence	6 (24)	0 (0)
Constipation	3 (12)	1 (2)
Bladder dysfunction	2 (8)	0 (0)
Haemorrhage	2 (8)	0 (0)
Erectile dysfunction	0 (0)	0 (0)

Table 6. Post-operative Complications

Bowel Frequency/Day	Modified Thiersch	Abdominal Rectopexy
Constipation	4 (16)	1 (4)
1-2 times/day	11 (44)	24 (96)
2-3 times/day	9 (36)	Nil
More than 3 times/day	1(4)	Nil

Table 7. Post-operative Functional Results

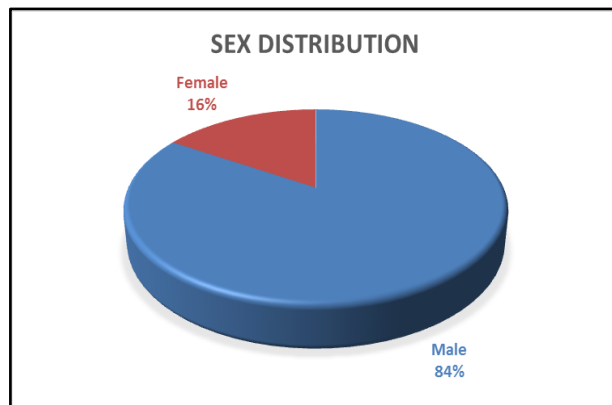


Figure 2. Sex Distribution

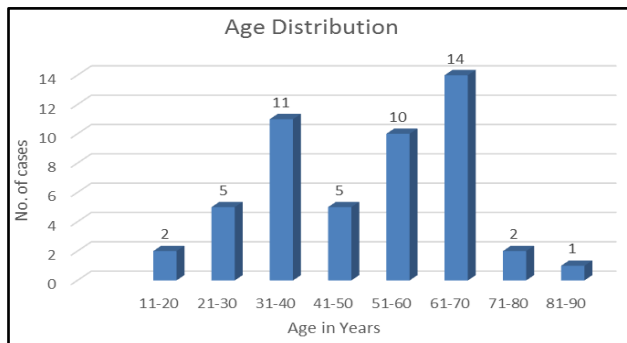


Figure 1. Age Distribution

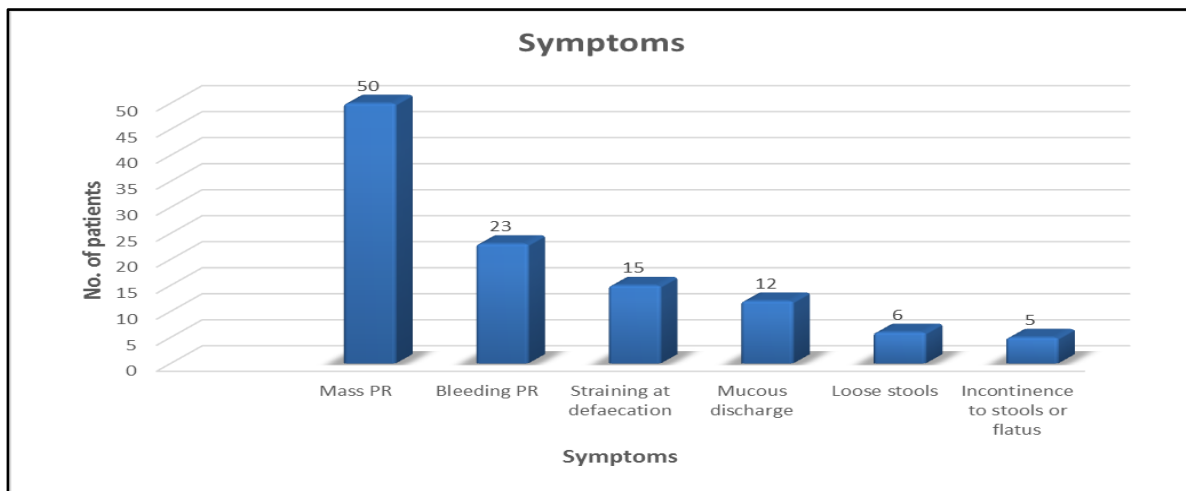


Figure 3. Symptoms

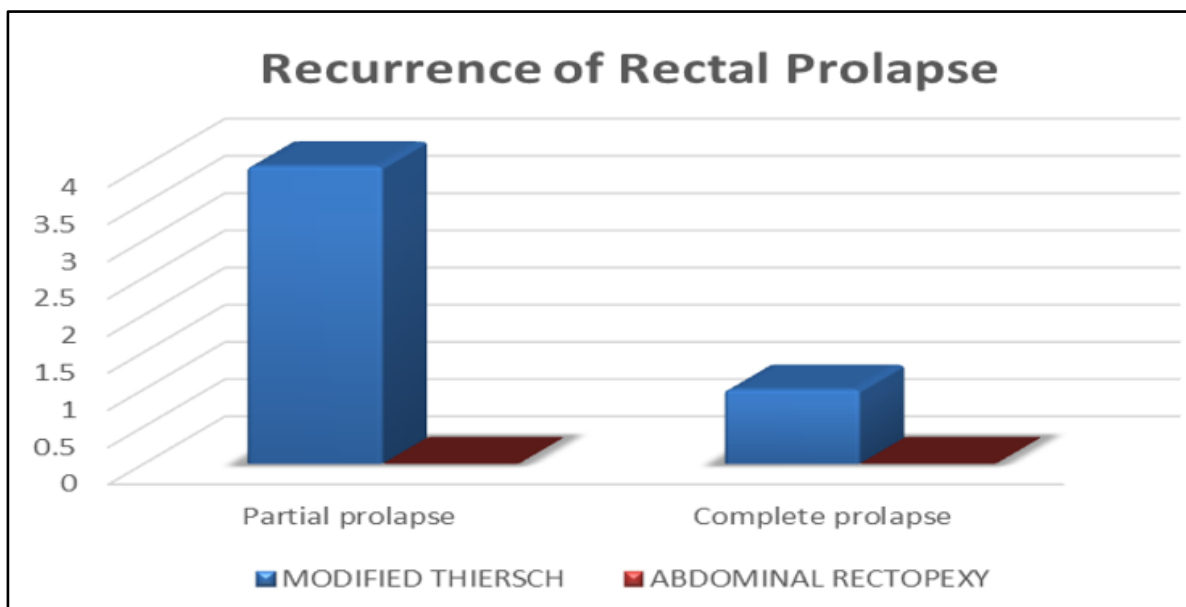


Figure 4. Recurrence of Rectal Prolapse

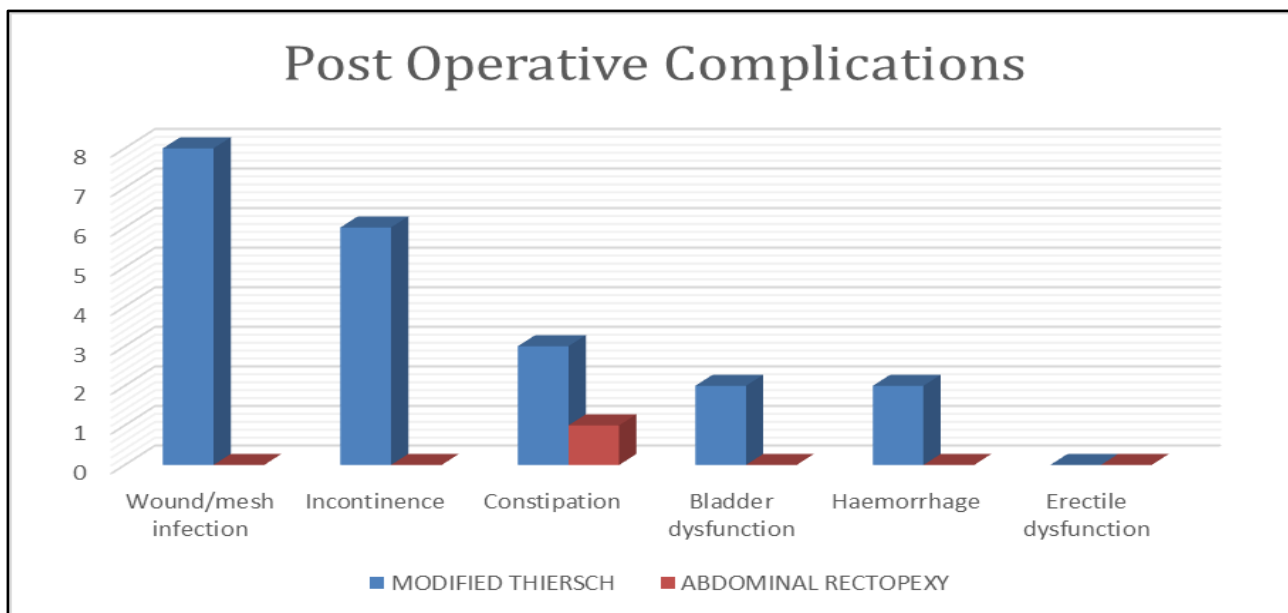


Figure 5. Post-operative Complications

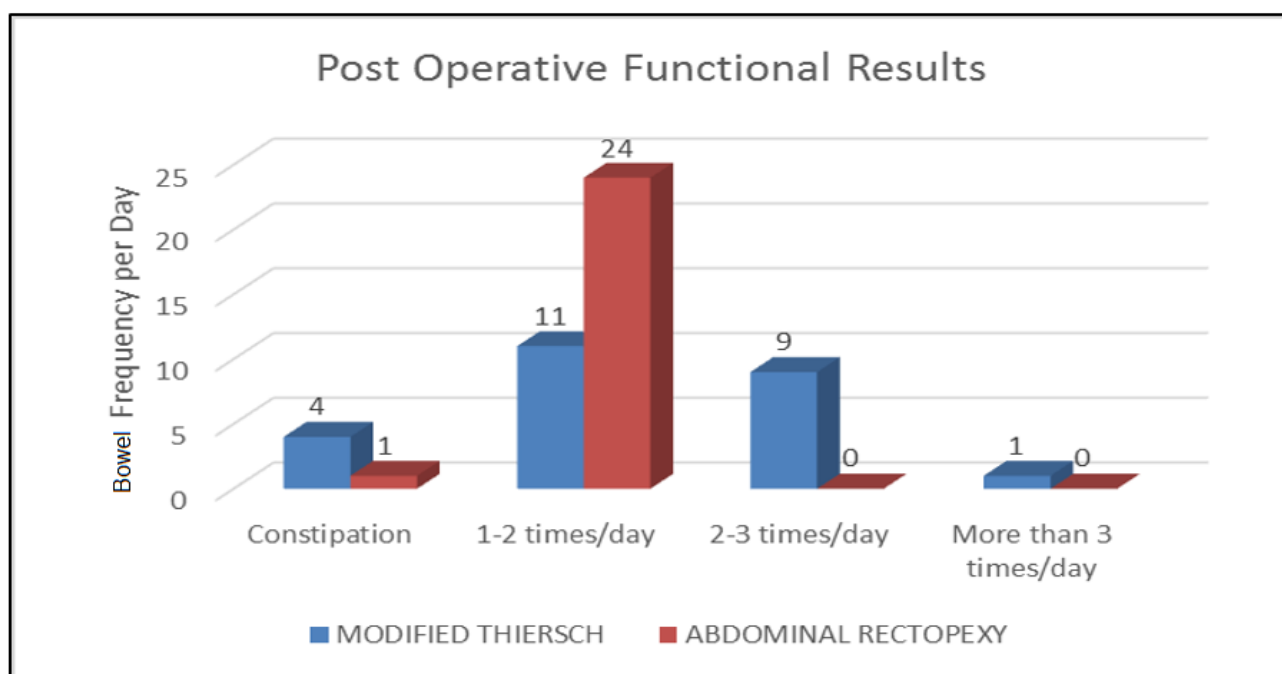


Figure 6. Post-operative Functional Results

DISCUSSION

Complete rectal prolapse is a distressing condition affecting both personal and social life of patients and is more common in adults than in children. In our study, complete rectal prolapse is seen predominantly at the age of 61-70 (28%) of cases. No paediatric cases were included in the study.

Usually incidence of rectal prolapse is more in female with female to male ratio of 6:1. However, in our study, there is a male predominance with male patients being 42 (84%) and the females being 8 (16%). Increased incidence in males is also reported in India.⁵ All the female patients in our study were parous without any evidence of cystocele, rectocele or uterine prolapse.

The most common symptom was mass per rectum (100%) found in all patients followed by bleeding PR in 23% of cases.

The aetiology of rectal prolapse still remains elusive. Constipation with straining was considered to be one of the factors in the aetiology of prolapse. We have found constipation only in 4 (27%) patients preoperatively.

Incontinence of various grades reported in different studies. Our study had 5 (10%) of patients with incontinence for liquid stools only. The stool frequency was more than 3 times a day in 2 (4%) patients.

In the postoperative follow up, only 1 (4%) patient had constipation in the abdominal rectopexy group, but in modified Thiersch 4 (16%) patients had constipation. There was a bowel frequency of 1-2 per day in 96% of the

abdominal group, but only 44% in the Thiersch group. No other significant post-operative complication was observed in the abdominal rectopexy group whereas in the Thiersch group 8 (32%) patients had wound infection, 6 (24%) had incontinence, 3 (12%) had constipation, 2 (8%) had bladder dysfunction, 2 (8%) had haemorrhage and bowel frequency were 1-2/day in only in 11 (44%) of the patients. So, from our study it can be concluded that the overall morbidity was negligible with abdominal rectopexy compared with the modified Thiersch repair.

There was recurrence of rectal prolapse in 5 (20%) patients in modified Thiersch group compared to no recurrence in the abdominal rectopexy. Over the past 30 to 35 years, abdominal rectopexy has become the accepted management of complete rectal prolapse in patients fit enough for an abdominal procedure.

CONCLUSION

The abdominal rectopexy using Prolene mesh produced no morbidity or recurrence in our study. Whereas with the modified Thiersch repair, morbidities were observed in many subjects. Further, abdominal rectopexy was easy to learn and master. There were no significant postoperative complications including intractable troublesome constipation or incontinence, mesh infection, etc. compared to the

modified Thiersch repair. Functional result in the form of improvement in bowel frequency was also excellent in the abdominal rectopexy. Therefore, we conclude that abdominal rectopexy using Prolene mesh is an ideal operation for complete rectal prolapse in patients who are fit for an abdominal procedure.

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