

# Research Journal of Pharmaceutical, Biological and Chemical Sciences

## Rectal Prolapse: A Case Series Analysis.

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### ABSTRACT

Rectal prolapse is a condition characterized by protrusion of a part or whole of the rectum through the anus. “The search for a single common theory for the cause of rectal prolapse has not been fruitful.” “The precipitating factors in the development of rectal prolapse have not been completely understood. Various theories have been put forth to explain the cause(s) of prolapse.” The above two statements give a clear picture about how rectal prolapse is still a mystery to a surgeon. Numerous theories have been proposed to explain the mechanism in which rectal prolapse develops but none of them comprehensively explain the mechanism in all the various scenarios. When it comes to the investigations required, it ranges from simple proctoscopy to complicated procedures like dynamic pelvic floor MRI & cinedefecography. In many of the previous studies, majority of the patients had normal findings in all the investigations. Finally if we look at the treatment options available, there are about 130 or more surgeries described for rectal prolapse alone, which also shows the poor understanding of the disease process.

**Keywords:** Rectum, prolapse, pelvic floor, surgeries for rectal prolapse

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## AIMS AND OBJECTIVES

The main aim of the study is to identify the possible causative factors, mode of presentation, complications of rectal prolapse. To evaluate the effects of various operative procedures for rectal prolapse and their complications.

The study was conducted at Government Stanley Medical College and Hospital, Department of General Surgery, Chennai between May 2010 and October 2012 by a retrospective and a prospective analysis of the patients who were admitted in the surgical unit with rectal prolapse.

### Inclusion Criteria

All patients with rectal prolapse, both partial and complete, who underwent surgery by any method, were included in the study.

### Exclusion Criteria

Patients who refused to undergo complete clinical evaluation and surgery were excluded from the study  
Patients who were lost for follow up for a minimum of 6 months.

## METHODOLOGY

**30 patients** who presented with partial or complete prolapse were included in the study.

The study design is as follows.

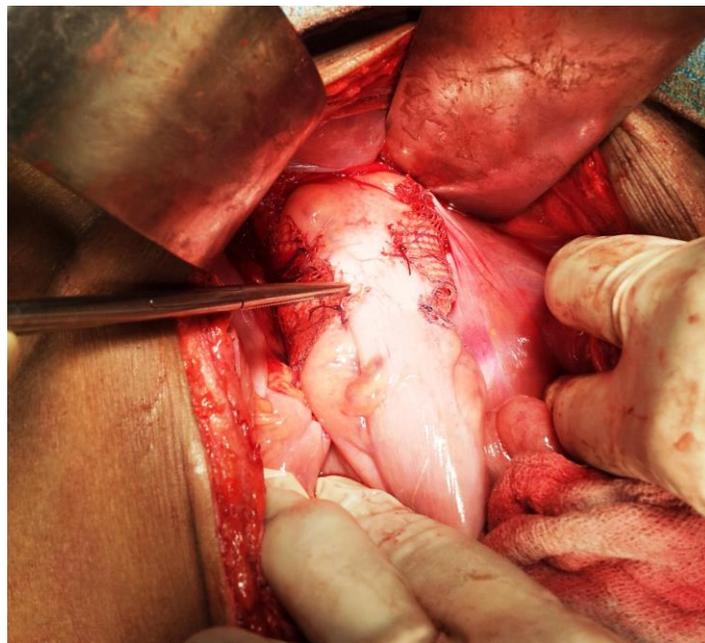
- All patients were subjected to detailed history taking and physical examination including proctoscopy.
- Patients underwent basic investigations like complete blood counts, bleeding time, clotting time and renal function tests, cardiac evaluation by ECG and echocardiography, and if warranted a Chest X ray.
- All patients were subjected to abdominal USG or CECT abdomen to rule out any other intra-abdominal pathology & colonoscopy / sigmoidoscopy for intra luminal causes of rectal prolapse.
- All patients were subjected to appropriate surgery and were followed up closely in the post-operative period. All were regularly followed up at the end of 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup> month and every 3 months later with a detailed history, clinical examination and per rectal examination each time.
- The details were recorded in a pre-designed format which was later analysed.



Complete Rectal Prolapse



**Incarcerated Complete Rectal Prolapse**



**Abdominal Mesh Rectopexy**

### **RESULTS**

One patient had a previous history of lateral sphincterotomy for fissure in ano followed which he developed complete rectal prolapse one year later, for which he underwent Delorme's procedure 6yrs back. But the patient developed recurrence 2 years subsequently. One patient underwent hemorrhoidectomy 20 years back, 5years later he developed rectal prolapse. One patient had history of complete perineal tear during her 3<sup>rd</sup> pregnancy, 30yrs back which was primarily repaired in the hospital. One patient had history of Acute Diarrhoeal Disease with severe dehydration, treated in a hospital. Another patient had history of malaria followed by severe weight loss.

Average age of presentation was 46.5yrs (Range: 19 – 75yrs). A majority of the patients were in the age group of 41 – 60 years (40%) followed by 20 – 40yrs age group (33.3%). Males comprised the majority of the patients (67%) with only 4 females (13%) in the study group. Mass descending per rectum and mucoid

discharge per rectum was present in 100% patients. Five patients (16%) presented with mass descending per rectum with bleeding per rectum. One patient presented with mucoid diarrhoea (3%). Only one patient presented with incarcerated rectal prolapse. Overall mean duration of prolapse was 3.8yrs (Range: 1 month - 15yrs) with the mean duration of partial prolapse being 1.2yrs (Range: 1 month – 2yrs) and complete prolapse being 7.4yrs (Range: 6 months-15yrs). Pain was present in 2 patients (6%), bleeding PR in 5 patients (16%), and constipation in 5 patients (16%).

Partial prolapse was found in 16 patients (53%) and complete prolapse in 14 patients (47%).

All the prolapses were reducible except one patient who presented with incarcerated prolapse.

Proctoscopy showed haemorrhoids in two patients (6.6%), solitary rectal ulcer over the anterior wall in three patients (10%), distal proctitis in 7 patients (23.4%). Rest of the patients (60%) had normal findings.

Sigmoidoscopy showed haemorrhoids in two patients (6.6%), solitary ulcer in three patients (10%), and distal proctitis in 7 (23.4%) patients. Solitary pedunculated polyps were present in two patients (6.6%), both of whom were cases of complete prolapse. Both the patients underwent endoscopic polypectomy and the histopathological examination showed them to be benign.

USG / CECT were done in all patients who were found to be normal.

Among the various predisposing factors that were taken into consideration such as previous perineal surgery, complete perineal tear, acute diarrhoea with weight loss, constipation, solitary rectal ulcer and rectal polyps; most of the patients presented with a history of constipation, followed by solitary rectal ulcer.

All the patients with partial prolapse underwent Delorme's procedure under subarachnoid block. Among the patients with complete prolapse, 9 patients underwent abdominal mesh rectopexy, two patients underwent perineal mesh rectopexy, and two underwent abdominal resection and fixation. One patient who presented with irreducible prolapse was subjected for emergency reduction under GA followed by Thiersch's procedure. Once the general condition of the patient improved, he was subjected for abdominal mesh rectopexy.

Mean duration of hospital stay was 6 days. Patients who underwent a perineal procedure (18 patients) had a mean hospital stay of 3.8 days and those who underwent abdominal procedure had a mean hospital stay of 9.2 days.

Mean duration of follow up was 8 months.

Two patients developed prolonged post-op paralytic ileus, one in a patient who underwent abdominal mesh rectopexy and another in a patient who underwent resection and fixation. Both the patients improved on conservative management of paralytic ileus.

One patient developed wound infection which was treated with appropriate antibiotics. None of the patients developed incontinence.

Out of 4 patients who presented with constipation, 3 patients did not complain of constipation in post-operative period, whereas constipation persisted in one patient. Two patients developed constipation in post-operative period which improved after treatment.

Only one patient developed recurrence. Patient had undergone a perineal mesh fixation, but the prolapse recurred after 6 months. Hence the patient was subjected for abdominal resection and mesh fixation procedure. Patient is on follow up for the past 4 months without any complaint.

## DISCUSSION

In the present study, majority of patients were in the age group of 41 – 60yrs (40%). We did not encounter any pediatric case during our study period. Our study also had similar results. [8,9]

With respect to the sex predominance, western studies show predominant involvement of female population with a female to male ratio of 6:1, whereas our study has a predominant male population (male : female –6.5 : 1), which is on par with the studies from India and Other Asian countries. [10]

We encountered almost equal incidence of both partial and complete rectal prolapse, which accounted for 53% and 47% respectively. [11]

Incontinence to stools / flatus has been reported as a presenting symptom in various studies ranging from 30 – 80%, but we did not have any patient presenting with incontinence. [12]

Etiology of prolapse could not be identified in majority of our patients. Constipation, which is one of the commonest predisposing causes of rectal prolapse, was present in only 16% of cases in our study. [13]

Previous anorectal surgeries/ perineal surgeries have been proposed to be one of the predisposing factors for rectal prolapse. In our study we had one patient who underwent lateral sphincterotomy following which he developed rectal prolapse for which he underwent Delorme's procedure, but he developed recurrence of prolapse one year later and presented to us. One more patient underwent hemorrhoidectomy 20 years back. One elderly female had history of complete perineal tear repair. [14]

Severe dehydration or acute weight loss which is also the predisposing factors was present in two cases in our study.

Partial prolapse had a shorter duration of symptoms (1.2yrs) when compared to complete prolapse (7.4yrs).

Proctoscopy was normal in majority of patients (60%). Abnormal findings noted were those associated with prolapse like Solitary rectal ulcer (10% cases), haemorrhoids (6.6%), distalproctitis (23.4%). [15]

Sigmoidoscopy is mandatory in all patients of rectal prolapse to rule out any intraluminal causes of prolapse. Sigmoidoscopy showed findings similar to proctoscopy. In addition to above findings, two patients showed presence of solitary rectal polyp which might be a cause of rectal prolapse. Both the patients underwent endoscopic polypectomy and specimens were benign in nature. [16]

Imaging studies of abdomen were done to rule out intra-abdominal causes which were found to be normal in all the patients. [17]

Delorme's procedure is the preferred surgical method for partial rectal prolapse due to easy of the procedure, less convalescent period and less postoperative morbidity. All the patients of partial rectal prolapse in our study were subjected to Delorme's procedure. [18, 19]

In concern with the cases with complete prolapse, the choice of surgical procedure was based on the length of prolapse, duration of symptoms, the age of the patient and most importantly the choice of the patient.

Abdominal mesh rectopexy, being the most commonly practiced procedure throughout the world [20, 21], was the most commonly used procedure in the present study. Thiersch's procedure, being reserved only for elderly patients, was used as a temporary procedure in one of the patients who presented with incarcerated rectal prolapse. The patient underwent abdominal mesh rectopexy later.

The mean duration of hospital stay was relatively less in patients undergoing perineal procedures when compared to the abdominal procedures, owing to the absence of large abdominal wound in perineal surgeries thus lessening the recovery time. [22, 23]

Prolonged postoperative ileus is a well-documented complication in the early postoperative complication in abdominal procedures due to the bowel handling. It was present in only two patients (12.5%) which were treated conservatively. [24]

Wound infection was also documented in only one patient (6.3%) who was treated with appropriate antibiotics.

None of the patients developed incontinence in the postoperative period.

Abdominal rectopexy is known to cause constipation in 10 – 47% according to various studies. In our study, preoperative constipation improved in 75% patients whereas 6.7% patients developed constipation postoperatively which subsided after medical management. [25]

Recurrence rates according to various studies ranges from 0 – 5%, based on the type of procedure done. In our study only one patient who underwent perineal mesh rectopexy developed recurrence after 6 months accounting an overall recurrence rate of 3.3%. [26, 27]

There was no mortality observed in the present study.

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