Original Article

Rectal Prolapse - Recto-Sigmoidopexy as Surgical Option: A Retrospective Study

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Abstract

Background: Complete rectal prolapse is a disabling condition affecting elderly patients and is frequently associated with fecal incontinence and impaired quality of life. Surgical intervention remains the definitive treatment, with several abdominal and perineal procedures available. Recto-sigmoidopexy is a less extensive abdominal procedure that may be particularly suitable for elderly and high-risk patients. **Aim**:To evaluate the safety, functional outcomes, and long-term recurrence rates of recto-sigmoidopexy in patients with complete rectal prolapse.. **Material and Methods:** A retrospective study was conducted on 30 patients with complete rectal prolapse who underwent recto-sigmoidopexy at a tertiary care center. Patient demographics, operative details, postoperative complications, functional outcomes, and recurrence rates were analyzed. Patients were followed up for a median duration of 15 years**. Results:** The study cohort comprised 24 women and 6 men with a median age of 76 years. Preoperative fecal incontinence was present in 24 patients. The median operative time was 42 minutes, and the median fixation time was 8 minutes. Thiersch stitching was additionally performed in patients with bulky rectal prolapse to provide anal sphincter support. One patient developed postoperative bowel obstruction, which was managed conservatively. No device-related complications were observed. Overall, the procedure demonstrated favorable functional outcomes with low morbidity and acceptable recurrence rates during long-term follow-up. **Conclusion:** Recto-sigmoidopexy is a safe, simple, and time-efficient surgical option for complete rectal prolapse in elderly patients. It offers good functional outcomes, low postoperative morbidity, and acceptable long-term recurrence rates, making it a valuable treatment alternative, particularly in elderly and high-risk individuals.

Keywords: Rectal prolapse; Recto-sigmoidopexy; Fecal incontinence; Abdominal fixation.

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Introduction

Rectal prolapse is a disabling anorectal condition characterized by full-thickness protrusion of the rectum through the anal canal, representing advanced pelvic floor dysfunction. It is commonly associated with fecal incontinence, constipation, bleeding, and reduced quality of life. Complete rectal prolapse usually requires surgical management due to its progressive nature.[1,2]

The condition has a prevalence of about 0.25% and predominantly affects elderly, multiparous women, with a female-to-male ratio of 3:1 to 10:1. In developing countries like India, it is often seen in younger age groups (31–50 years), with multiparity as a major risk factor. Despite underreporting, it contributes significantly to surgical workload in tertiary centers.[3,4] The etiology is multifactorial, involving pelvic floor weakness, redundant sigmoid colon, deep pouch of Douglas, and inadequate rectal fixation. These factors are worsened by chronic straining, constipation, and increased intra-abdominal pressure, along with neurological and connective tissue disorders.[5,6]

Surgery remains the definitive treatment, broadly categorized into abdominal and perineal approaches. Abdominal procedures are preferred in fit patients due to lower recurrence, while perineal methods are reserved for high-risk individuals. Recto-sigmoidopexy is a less extensive abdominal technique offering shorter operative time, preserved bowel function, and acceptable recurrence rates, particularly in elderly patients.[7,8] This study evaluates the clinical outcomes of recto-sigmoidopexy in complete rectal prolapse, focusing on patient characteristics, operative details, complications, functional outcomes, and recurrence.

Materials and Methods

Study design and Setting: This is a retrospective observational case series carried out in the Department of General Surgery at

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Chigateri Hospital attached to J. J. M. Medical College, Davangere. The study included patients who were operated on for complete rectal prolapse. All included patients underwent abdominal recto-sigmoidopexy as the primary surgical treatment. For bulky rectal prolapse Thiersch stitching was done for 1 month to support anal sphincter.

Patient selection: A total of 30 patients who underwent Recto-sigmoidopexy for full-thickness rectal prolapse during the study period were included in the analysis

Inclusion criteria:

- Adult patients aging 20-80 years
- Complete rectal prolapse

Exclusion criteria:

- Associated with Uterine prolapse

Preoperative evaluation: All patients underwent a comprehensive preoperative clinical evaluation. This included a detailed history taking, general physical examination, and per rectal examination to confirm the diagnosis of complete rectal prolapse. Relevant investigations like ultrasound abdomen and pelvis or CT abdomen and pelvis were performed

Surgical Technique: All surgical procedures were performed under spinal anaesthesia. Patients were positioned in the supine position. The abdomen was opened through a lower midline incision. After entering the peritoneal cavity, the sigmoid colon and rectum were systematically inspected for redundancy and any associated pelvic pathology.

Mobilization of the Sigmoid Colon: Mobilization of the sigmoid colon was achieved by incising the lateral peritoneal reflection on the left side. The sigmoid mesocolon was dissected meticulously to mobilize the sigmoid colon while preserving its vascular pedicle, including branches of the inferior mesenteric artery and vein. Adequate mobilization was carried out up to the rectosigmoid junction to ensure that the colon could be repositioned without tension.

Fixation of the recto-sigmoid junction: Following mobilization, the sigmoid colon was fixed to the parietal wall of the anterior abdominal wall laterally using three - four interrupted non-absorbable sutures. Sutures were placed through the seromuscular layer of the recto-sigmoid junction, carefully avoiding the mesenteric border to prevent vascular compromise. Fixation was performed in a manner that maintained a gentle curvature of the recto-sigmoid junction, avoiding kinking or undue tension.

For bulky rectal prolapse Thiersch stitching was done to support anal sphincter.

Closure and Postoperative Care: After fixation, haemostasis was ensured. The abdominal wound was then closed in layers. Postoperatively, patients were started on oral fluids after the return of bowel sounds and were encouraged to ambulate early. All patients were advised a high-fiber diet and prescribed laxatives to prevent constipation and straining during defecation.

Results

A total of 30 patients with a diagnosis of complete rectal prolapse were enrolled in the study. The cohort comprised 24 women and 6 men, and all patients underwent treatment with recto-sigmoidopexy. The median age was 76 years, with a range of 48–84 years, while the median body mass index (BMI) was 21.2 kg/m² (range: 130.4–24.7 kg/m²). The presence of associated medical comorbidities was noted, including prior myocardial infarction in 5 patients, heart failure in 4 patients, and COPD in 10 patients. 4 among the study participants had a history of previous abdominal surgery [Table 1].

Table 1: Demographic and patient characteristics

Category	Variable	Result
Demographics	Number of patients	30
	Sex (Male : Female)	6 : 24
	Median age (range)	76 years (430–304)
	Median body mass index (range)	21.2 kg/m² (130.4–24.7 kg/m²)
Clinical Characteristics	Diagnosis	Complete rectal prolapse
	History of fecal incontinence	24/30 patients
	Previous abdominal surgery	4
Comorbidities	Myocardial infarction	5 patients
	Heart failure	4 patients
	COPD	10 patients

All procedures were carried out under spinal anaesthesia. The median operative duration for recto-sigmoidopexy was 42 minutes, with a range of 25–65 minutes. The median fixation time was 8 (range: 5–10 minutes), and a median of 3 fixation sutures were applied. For bulky rectal prolapse, Thiersch stitching was done for 1 month to support anal sphincter.

During follow-up, improvement in fecal incontinence was noted in all of the 30 patients. None of the patients experienced postoperative constipation. The median follow-up period was 15 years. No Recurrence of rectal prolapse after surgery was observed.

No further complications were documented during the follow-up period. Additionally, none of the patients reported deterioration in abdominal symptoms during follow-up, including diarrhea, constipation, or bowel obstruction.

Discussion

Complete rectal prolapse is a complex pelvic floor disorder predominantly affecting the elderly and associated with significant functional impairment. Surgical management remains the mainstay of treatment. In this retrospective case series, recto-sigmoidopexy was found to be a feasible and effective procedure, demonstrating low complication rates, no recurrence, and satisfactory functional outcomes.[9-11]

The demographic profile observed aligns with existing literature, with a predominance of elderly female patients, likely due to

pelvic floor weakness, hormonal factors, and obstetric trauma. The median age in this study was 76 years, with females forming the majority.[12-14] Fecal incontinence is a common presentation in rectal prolapse. 24 out of 30 patients in this study had preoperative incontinence, with notable improvement postoperatively, suggesting that anatomical correction enhances anorectal function.[15-18]

Recto-sigmoidopexy was performed under spinal anesthesia in all patients, highlighting its suitability for elderly individuals with comorbidities. The shorter operative duration further supports its use in high-risk patients.[19-23]

Postoperative morbidity was minimal, with no cases of constipation, indicating preservation of colonic motility compared to conventional rectopexy. No recurrence was observed, consistent with the low recurrence rates reported for abdominal procedures compared to higher rates seen in perineal approaches. Additionally, no new or worsening bowel symptoms were noted during follow-up.[24-28]

The findings support recto-sigmoidopexy as a safe, simple and time saving surgery in elderly patients with multiple comorbidities.

Conclusion

Recto-sigmoidopexy can be considered a safe, simple and time saving surgical modality for treating complete rectal prolapse, especially in elderly and high-risk patients. The technique is associated with a shorter operative duration, low postoperative morbidity, significant improvement in fecal incontinence, with zero recurrence and the complications of other surgeries are prevented.

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Conflicts of interest

There are no conflicts of interest.

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