Case Series Study

The Results of Transperineal Surgery for Rectal Prolapse (10-Year Experience)

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ABSTRACT

Background: The Altemeier procedure for rectal prolapse offers excellent results in all age groups with minimal complications and allows for short hospital stays and recovery periods. We aimed to evaluate the results of transperineal surgery for rectal prolapse.

Methods: In this case series study, 74 patients underwent perineal rectal prolapse surgery using Altemeier method and coloanal anastomosis at Ayottollah Taleghani Hospital, Tehran from 2013 to 2023 were enrolled.

Results: Overall, 48 patients were female (64.8%) and the mean age was 52 years (range 18 to 80). Common symptoms were constipation (62.1%), fecal incontinence (76.95%), rectal bleeding (41.85%), and difficult defecation (9.45%). The Jorge and Wexner incontinence score before and after the operation was 13.5 and 5.5, respectively, and no statistically significant difference was observed (P=0.41). No mortality was reported after surgery.

Conclusion: The long-term recurrence rate after Altemier's procedure was low. This method has a reasonable recurrence rate compared to other techniques, and is a good option for younger patients without underlying disease. Further multicenter studies with larger sample sizes are needed to evaluate the outcomes of transperineal surgery for rectal prolapse

KEYWORDS
Altemeier; Rectal prolapse; Fecal incontinence; Recurrence

Please cite this paper as:
Ariapour A, Zeinalpour A, Nikshoar M, Dashti Rahmatabadi MH, Pishgahi M, Towliat SM, Anaraki Firooz F. The Results of Transperineal Surgery for Rectal Prolapse (10-Year Experience). World J Plast Surg. 2025;14(2): 122-125.
doi: 10.61186/wjps.14.2.122

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Received: 01/25/2025
Accepted: 07/18/2025

INTRODUCTION

Rectal prolapse is a condition in which the entire wall of the rectum protrudes through the anus. It can cause a variety of functional problems that significantly compromise the quality of life of patients [1].
The incidence of rectal prolapse is 2.5 per 100,000 in the general population. It occurs most often in patients over 50 years of age with a female to male ratio of approximately 10 to 1[2]. It is also associated with a mixed pattern of functional disorders ranging from difficulty in defecation, the so-called obstructed bowel syndrome (ODS), to fecal incontinence. Its symptoms include mucus discharge, a feeling of

[DOI: 10.61186/wjps.14.2.122]

incomplete bowel movements, fecal incontinence, anal pain, constipation, and rectal bleeding [3].

The cause of this disease is multifactorial includinh old age, weak pelvic floor muscles, obesity, chronic constipation, straining, multiple births, previous pelvic surgery, deep Douglas obstruction, and connective tissue disorders [4]. Full-thickness rectal prolapse (FTRP) does not respond to medical treatments, and the definitive treatment for this condition is surgery[5].

Many surgical methods have been proposed for rectal prolapse, but the preferred method for rectal prolapse is still unclear because the recurrence and complication rates are high [6].

Despite surgical anatomical correction, patients often complain of persistent symptoms and recurrence in various forms. The proposed surgical treatments are divided into abdominal and perineal approaches [2, 7, 8].

The Altemeier procedure is a well-known procedure for the correction and treatment of full-thickness rectal prolapse through the perineum. In this procedure, the surgeon pulls the rectum through the anus, resects a portion of the rectum and sigmoid, and after repairing the Douglas pouch, anastomoses the remaining rectum to the colon. The goal is to correct the rectal prolapse and relieve pain, bleeding, mucus secretion, and improve quality of life [2, 9].

Given the limited studies in Iran, we aimed to evaluate the results of transperineal surgery for rectal prolapse.

METHODS

In this case series study, all patients underwent perineal rectal prolapse surgery using Altemeier method and coloanal anastomosis at Taleghani Hospital, Tehran from 2013 to 2023 were enrolled. The inclusion criteria were age over 18 years, rectal prolapse, and surgery for rectal prolapse. The exclusion criteria were concomitant connective tissue disease and unresponsiveness to touch. Among the eligible patients, 111 cases undergoing transperineal rectal surgery were selected, of which 37 were excluded from the study due to Delorme's surgery or incomplete records. Finally, 74 patients undergoing Altemeier surgery were included.

A questionnaire was designed to collect information including age, gender, and recurrence of prolapse after Altemeier procedure, duration of symptoms before surgery, duration of recurrence of prolapse after surgery, rate of improvement of fecal incontinence before and after Altemeier procedure, comorbidity, and mortality.

The Ethical Committee of Shahid Beheshti University of Medical Sciences approved this study (Ethics number: IR.SBMU.RETECH.REC.1403.016).

Statistical analysis

Statistical analysis was done by SPSS software version 26 (IBM Corp., Armonk, NY, USA). Central and descriptive statistics were reported for quantitative. Kolmogorov–Smirnov and Shapiro-Wilk tests were used to check the normality distribution. Paired *t*-test was used for statistical analysis. P value<0.05 was considered statistically significant.

RESULTS

Seventy four patients undergoing rectal prolapse surgery using the Altemeier method underwent final evaluation. Among total patients, 64.8% of participants were female (n=48). Common symptoms recorded as the patients' chief complaints included constipation (62.1%), fecal incontinence (76.95%), rectal bleeding (41.85%), and difficult defecation (9.45%). No mortality was reported after surgery. Diabetes, asthma, and hyperthyroidism were observed in 30.1%, 6.75%, and 16.2% of patients.

One recurrence (1.35%) observed in a man over 65 years of age with comorbidities of diabetes and asthma and mild symptoms of benign prostatic hyperplasia. No major complications were observed in any of the patients. More details are provided in Table 1.

The Jorge and Wexner incontinence score before and after the operation was 13.5 and 5.5, respectively, and no statistically significant difference was observed (P=0.41). After the operation, patients were more satisfied than before the operation with the improvement of symptoms of soiling, itching, rectal bleeding, constipation, and abdominal pain, but fecal incontinence did not improve.

[DOI: 10.61186/wjps.14.2.122]

Table 1: Clinical case reports of rectal prolapse surgery

Variable		Results
Sex, n (%)	Female	48 (64.8)
	Male	26 (35.2)
Female, n (%)	25-35 years	14 (18.9)
	35-50 years	11 (14.85)
	50-65 years	17 (22.95)
	>65 years	6 (8.1)
Male, n (%)	25-35 years	11 (14.85)
	35-50 years	9 (12.15)
	50-65 years	3 (4.05)
	>65 years	3(4.05)
Mean duration of symptoms before surgery, month		12
Average length of time for recurrence after surgery, month		9
Fecal incontinence, n (%)		57 (76.95)
Constipation, n (%)		46 (62.1)
Rectal bleeding, n (%)		31 (41.85)
Difficult defecation, n (%)		7 (9.45)
Diabetes, n (%)		23 (31.05)
Asthma, n (%)		5 (6.75)
Hypothyroidism, n (%)		12 (16.2)
Recurrence, n (%)	Female	4 (5.4)
	Male	1 (1.35)
History of hemorrhoidectomy, n (%)		5 (6.75)
History of hysterectomy, n (%)		5 (6.75)
History of abdominal rectopexy, n (%)		2 (2.7)
History of rectal prolapse surgery, n (%)		2 (2.7)
Major complications, n (%)		0
Mortality, n (%)		0

DISCUSSION

Rectal prolapse often occurs in older people and is more common in patients over 65 years of age, and in women. The results of our study are consistent with the results of studies showing that more surgeries were performed in females than in males [10, 11].

According to studies, female over the age of 50, especially those aged 65 and older, are 6 times more likely to develop this problem than male[2,9]. Surgery to treat rectal prolapse is performed more often in female than in male[6-8]. This may be due to the higher prevalence of this condition in female, as well as factors related to childbirth and weakness of the pelvic floor muscles. In fact, weakness of the muscles and ligaments in the rectal area, especially in female can lead to this problem.

Rectal prolapse is generally associated with other diseases and its clinical manifestations can vary from progressive incontinence to constipation due to obstructive evacuation. Studies have shown that fecal incontinence is reported by 75% of patients with rectal prolapse, and constipation occurs in 10 to 65% [6, 12]. According to the present study, constipation (62.1%), fecal incontinence (76.95%), rectal bleeding (41.85%), and difficult defecation (9.45%) were the most common.

Studies have reported a recurrence rate of 58% for Altemeier surgery[13, 14]. The results of this study are consistent with the results of the studies, showing that the number of cases of surgical recurrence in Altemeier's method was 5 out of 74 cases (6.75%), which indicate a low recurrence rate in the transperineal method.

In a study which aimed to investigate the risk of recurrence in two surgical methods, abdominal or transperineal, for complete rectal prolapse in 1611 patients, the recurrence rate was 4.5% in the Altemeier method [15]. The recurrence rate was similar to our study.

In the study by Altomare et al., recurrence was 18% during a follow-up period of 41 months [16], which was different from the recurrence rate of 6.75% in our study. Although the follow-up in our study was 12 months. In another study, there was no recurrence at 43 months [17].

[DOI: 10.61186/wjps.14.2.122]

The present study had several limitations. The small sample size, retrospective nature, and incompleteness of several data such as sexual problems and urinary incontinence were other limitations.

CONCLUSIONS

The long-term recurrence rate after Altemier's procedure was low. This method has a reasonable recurrence rate compared to other techniques, and is a good option for younger patients without underlying disease. Further multicenter studies with larger sample sizes are needed to evaluate the outcomes of transperineal surgery for rectal prolapse.

CONFLICT OF INTERESTS

There is no conflict of interests.

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