

Premalignant Villous Adenoma Accompanying Irreducible External Rectal Prolapse

İrredüktable Eksternal Rektal Prolapsusa Eşlik Eden Premalign Villöz Adenom

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ABSTRACT

Rectal prolapse (or prosidensia) is a condition in which the rectal wall partially or completely protrudes from the anus all around, in full thickness. Although its etiology is not clear, it is now considered a pelvic floor disease. Although the ideal treatment method has not yet been determined, surgical intervention is the only definitive solution. Various surgical treatment methods have been defined, and the method to be chosen is determined according to the patient's general condition, symptoms, bowel habits, anatomy, and preoperative expectations. Rarely, rectal prolapse in the presence of a redundant colon may be accompanied by a mass lesion located in the ampulla recti. Our case with full-thickness rectal prolapse, for which oncological principles should be observed in the treatment, is presented as an example of this situation.

Keywords: Adenoma, Colonic polyps, Intussusception, Perineal procedure, Rectal prolapse

ÖZET

Rektal prolapsus (veya prosidensia), rektum duvarının tam katmanlı olarak, çevresel şekilde anüsten kısmen ya da tamamen dışarıya protrüze olduğu bir durumdur. Etiyolojisi tam olarak açıklığa kavuşmamış olmakla birlikte, günümüzde pelvik taban hastalığı olarak kabul edilmektedir. Henüz ideal tedavi yöntemi netleşmemiş olsa da, cerrahi müdahale tek kesin çözüm olarak kabul edilmektedir. Farklı cerrahi tedavi yöntemleri tanımlanmış olup, hangi yöntemin tercih edileceği hastanın genel durumu, semptomları, barsak alışkanlıkları, anatomik yapısı ve preoperatif beklentilerine göre belirlenmektedir. Nadir durumlarda, redundant kolon varlığında gelişen rektal prolapsus, ampulla recti'de yerleşmiş kitle lezyonu ile birlikte görülebilir. Tam katmanlı rektal prolapsus ile başvuran ve tedavisinde onkolojik prensiplere uyulması gereken olgumuz, bu duruma bir örnek olarak sunulmaktadır.

Anahtar Kelimeler: Adenom, İntussusepsiyon, Kolon polipleri, Perineal prosedür, Rektal prolapsus

INTRODUCTION

Rectal prolapse and intussusception are disorders where anatomical abnormalities linked to pelvic floor dysfunction cause the rectum to partially or fully prolapse from the anal canal. It can be internal or external. The term "internal rectal prolapse" or "intussusception" refers to partial or partial protrusion of the rectum via the anal canal, as opposed to full-thickness protrusion. In rectal prolapse, the pathophysiology of which is not clear, the circumferential folds prolapse concentrically. The primary complaint is a mass that protrudes from the anal canal during challenging defecation. About 25% of the cases with this symptom also have discomfort and pain 28–88% include fecal incontinence, and 15–65% include constipation.¹ The prevalence of external rectal prolapse is less than 0.5%. More than 90% of occurrences occur in women over the age of fifty who have had a vaginal birth.² Tissue strangling and ulceration should be closely monitored during rectal prolapse.³ It is treated with two separate surgical approaches, including abdominal and perineal approaches. There is no agreement or standardization to decide the best approach to take. The perineal technique is preferred for elderly individuals who are at risk, particularly those who have comorbidities that require abdominal surgery. The typical recurrence rate is 11% in perineal methods and 7% in abdominal approaches.^{4,5} Rarely can a large lesion in the rectal region be associated with rectal prolapse. Reduction may not always be possible, depending on the size of the lesion. Furthermore, the tumor could dissolve and spread during this time, deviating from the rules of oncological treatment. Simultaneous perineal and abdominal surgery is the right course of action in these situations to get good outcomes.

This article describes the diagnosis and course of therapy for a case in which the development of rectal prolapse was followed by the observation of a sizable rectal mass lesion near the anal opening.

CASE REPORT

The patient provided informed consent for this case report. A 73-year-old male patient presented to the emergency clinic complaining of a mass bulging from the anal region. The patient had no such complaints before. He mentioned that he had been bleeding from the anal area around once a month for nearly a year and had been having trouble defecating for quite some time. He had essential hypertension and had previously undergone bilateral inguinal hernia surgery. During the physical examination performed at the emergency clinic, it was discovered that the external rectal prolapse was caused by the mass placed in the prolapsed segment (Figure 1), and the mass could not be reduced. The patient had thoracoabdominal computed tomography (CT) and pelvic magnetic resonance imaging (MRI). On CT, there was no evidence of a metastatic focus in the thorax or abdomen. Contrast-enhanced sagittal plan MRI sequences showed a soft tissue lesion measuring 90 x 25 mm in size containing vascular structures, skin thickening, and an edematous appearance, which was only observed on contrast-enhanced images. Additionally, the prolapse of the rectum and mesorectal fatty planes approximately 105 mm distal from the pelvic floor level was noted (Figure 2). The colonoscopic examination revealed no concurrent intra-colonic mass lesions. Based on the available data, a diverting loop ileostomy and coloanal anastomosis were carried out along with intersphincteric ultra-low anterior rectal resection, which addresses the curative surgical treatment of the rectal tumoral mass using oncological principles and concurrently corrects the rectal prolapse (Figure 3b and 3c). The presence of a redundant colon was notable during laparotomy exploration (Figure 3a). After resection macroscopically, the mass lesion was found at the entrance of the anal canal. (Figure 4). Negative surgical margins were obtained in the frozen examination. The coloanal anastomosis was performed with a 3/0 polyglactin suture using a Lonestar anal retractor. Pathological examination revealed a tubulovillous adenoma adjacent to the anal entrance, 9.5 x 8 x 3 cm in diameter, containing high-grade dysplasia. The ileostomy was closed in the fourth week after surgery.

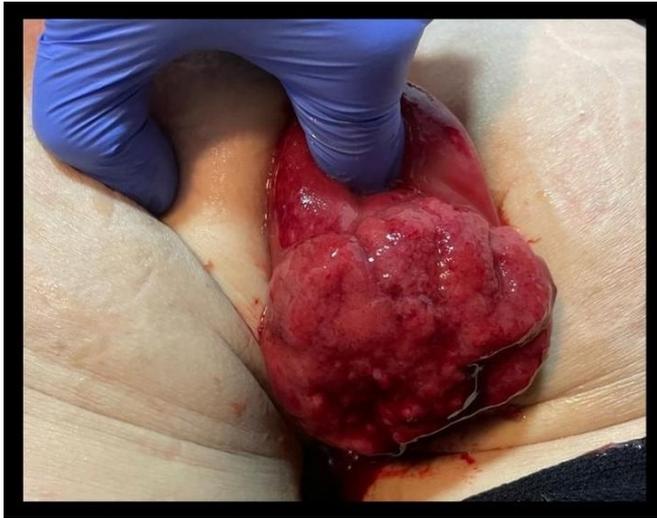


Figure 1. Appearance of a rectal tumoral mass and simultaneous external rectal prolapse in the anal region examination performed at the emergency department.

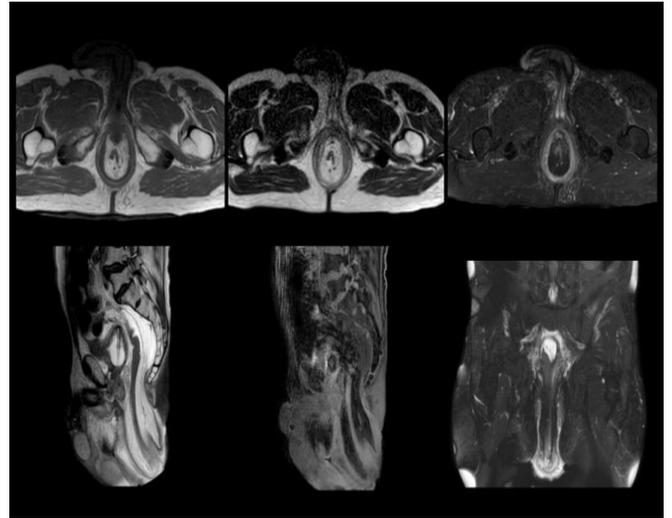


Figure 2. MRI demonstrates a soft tissue lesion containing vascular structures, skin thickening and an edematous appearance.

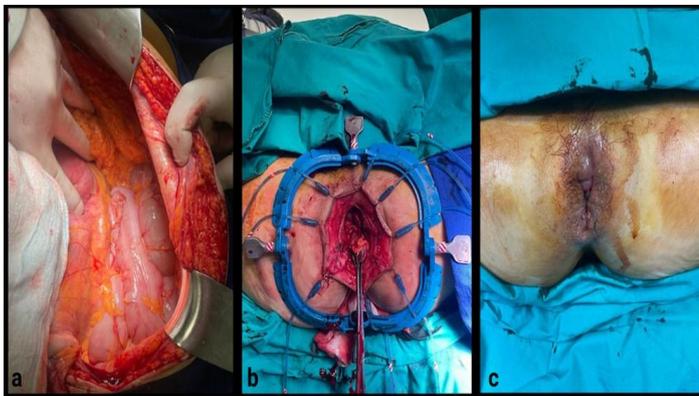


Figure 3. a) Redundant colon observed during laparotomy exploration b) View of the anal region in lithotomy position at the end of the surgery c) Coloanal intersphincteric anastomosis.



Figure 4. Macroscopic view of the sample. The mass lesion was located at the anal entrance. The area marked with a string is the internal anal sphincter.

DISCUSSION

The assessment of constipation and fecal incontinence is critical in rectal prolapse evaluation. Constipation develops as a result of lumen narrowing brought on by rectal invasion. Prolapse may arise as a result of subsequent total obstruction, severe straining, and colonic motility. As in our case, an obstructive mass lesion may be the cause of constipation, and if there was the simultaneous presence of a redundant colon, prolapse could easily develop. In such cases where rectal prolapse is associated with a mass, surgical intervention should be guided by oncologic principles and ensure treatment of the prolapsed segment. As in our case, rapid decisions should not be made in the treatment management of patients presenting to the emergency outpatient clinic for the first time with such a condition, and the most appropriate procedure should

be preferred according to the findings. As a matter of fact, four days elapsed between the presentation of our patient and the day of surgery for examinations and preparation.

Fecal incontinence commonly develops in the final stages of the procedure. A multitude of elements contribute to its growth. These include the existence of external prolapse, pudendal neuropathy, anus dysfunction, and impaired excitatory rectoanal excitatory reflex. Clinical findings deteriorate due to stretch-related injuries to the sphincter caused by recurrent prolapse events. As a result, early intervention is critical. Fluoroscopic defecography (FD), dynamic magnetic resonance defecography (DMRD), anal manometry, endoanal ultrasonography, and colonoscopy are used to distinguish between rectocele, enterocele, cystocele, rectoanal intussusception, and

perineal descents. DMRD offers comprehensive details regarding the anatomy, soft tissue, and intrapelvic organ relationships of the pelvis. It is capable of distinguishing between rectorectal and rectoanal intussusception, which is mucosal and full thickness. It can have a 28–41% impact on clinical decision-making and surgical planning.⁶ Prognostic information can be inferred from endoanal ultrasonography for anatomy and anal manometers for anal sphincter function. Colonoscopies are typically performed prior to surgical intervention in order to rule out the presence of neoplasia and inflammatory bowel disease, which can occur concurrently with rectal prolapse. The diagnosis and treatment of the current case were based on oncological concepts. After a colonoscopy and the planning of a surgical operation, the possibility of a synchronous colon tumor and inflammatory bowel disease was ruled out using pelvic MRI.

The "Oxford radiological rectal prolapse staging system" is utilized radiologically before rectal prolapse treatment.⁷ As a result, there are five stages (Table 1), and grade 3–4 internal and external rectal prolapse is indicated for surgical intervention. Treatment can be planned to use an abdominal or perineal approach, depending on the surgeon's skill, the patient's age, any morbidities, and the patient's bowel habits.⁸ The functional outcomes of perineal methods (Table 2) have been highlighted as being worse and having greater recurrence rates; however, a recently published Cochrane analysis has demonstrated that the abdominal approach yields equivalent results.⁹ Open, laparoscopic, and robotic abdominal treatments can be used to achieve high functional outcomes and low recurrence rates in patients without severe peritonitis, deep infiltrative endometriosis, or the danger of general anesthesia. Various methods are classified based on the fixation method and the dissection plane (Table 2). Their shared objective is to improve functional outcomes and treat prolapse by fixing the rectum.⁸ Based on the Oxford rectal prolapse stage, the current case (Grade 5) exhibits a mass lesion in the superfluous colon and the ampulla recti at the same time. It is impossible to diminish the mass's distal boundary since it is in contact with the anal canal's inner mouth. Because of clinical circumstances, a surgical treatment plan could not be developed through a biopsy. There would be no reason to postpone the surgical treatment process because the biopsy result might not accurately reflect the full mass. For these

reasons, a combination of perineal and abdominal interventions was carried out based on oncological principles to cure the prolapse, tumoral mass, and constipation issues brought on by the long-term superfluous colon. It was preferred to do colonial anastomosis following intersphincteric ultra-low anterior resection. Before surgery, the patient was informed of the lack of any potential cancer, and the intervention was carried out with consideration for the morbidity load.

Patients are instructed not to take laxatives, lift large objects, or have intercourse for six weeks following surgery. It should be understood that recovery might not happen right away and that functional issues might not be fully fixed. The patient (gender, BMI, history of prior prolapses repair surgery, etc.) and surgical factors (inadequate anterior rectal dissection, insufficient mesh fixation to the anterior rectal wall or sacral promontorium, type of mesh) influence the recurrence rate.¹⁰ The patient did not need oncological treatment based on the pathological results. In the fourth postoperative week, her ileostomy was closed, and there were no surgical problems.

Treatment for rectal prolapse is a difficult procedure. Differential diagnoses must be carefully explored in multidisciplinary research to determine the best treatment. It should be kept in mind that rectal prolapse may be accompanied with malignant masses. In case of suspicion, surgery should be performed in accordance with oncologic principles by preserving surgical margins during the case. The qualities of the patient, the experience of the surgeon, and the technological equipment of the hospital play a crucial role in the decision-making process. Success rates will rise with the careful use of imaging modalities and grading methods that have been proven to work.

Table 1. The Oxford radiological rectal prolapse grading system.

High rectal	Grade I – Level above the rectocele
Low rectal	Grade II – Level of the rectocele but above the anal canal
High anal	Grade III – Descending to the top of the anal canal
Low anal	Grade IV – Descending into the anal canal
External	Grade V – Protrusion from the anal canal

Table 2. Abdominal and perineal procedures frequently performed in rectal prolapse surgery

Perineal Approach	
Delorme	Short segment prolapse (<5cm long)
Altemeier (Perineal proctosigmoidectomy)	Long-segment prolapse
Stapled transanal rectal resection (STARR)	For patients with obesity who experience obstructive defecation, associated rectocele, rectal intussusception, and satisfactory sphincter performance
Natural orifice transanal endoscopic rectopexy	The colon is fixed to the abdomen and promontory using custom endoscopic devices without mesh
Abdominal approach	
Wells procedure (Posterior mesh rectopexy)	Anterior dissection is avoided, and the dissection is performed through the lateral and posterior aspects. After attaching either a polyester or polypropylene mesh to the presacral fascia, it is loosely wrapped around the rectum (270°)
Orr–Loygue procedure (Lateral mesh rectopexy)	The rectum is mobilized circumferentially, and the mesh is fixed to the anterolateral rectal wall and sacral promontory
Frykman–Goldberg procedure (Resection rectopexy)	After complete rectal mobilization and sigmoid resection, the distal rectum is fixed to the presacral fascia using sutures. This procedure is preferred in cases of proven slow-transit constipation, redundant sigmoid colon, and preexisting diverticular disease
Suture rectopexy	The rectum is circumferentially mobilized, two or three sutures are placed on either side, and the lateral ligaments are fixed to the presacral fascia using non-absorbable sutures.
Ventral mesh rectopexy	No rectal mobilization or lateral dissection is performed in the original technique, and the lateral ligaments are preserved. The mesh is placed on the anterior rectal wall, and fixation to the sacral promontory is performed using sutures, staplers, or even surgical glue. Reinforcement of the rectovaginal septum, correction of the enterocele, correction of genital prolapses by adding sacrocolpopexy, and preservation of the hypogastric and parasympathetic nerves are possible by this technique

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Authorship contribution statement

Concept and desing: SA.

Acquisition of data: SA and CK.

Analysis and interpretation of data: SA.

Drafting of the manuscript: SA.

Critical revision of the manuscript for important intellectual content: SA and CK.

Statistical analysis: SA.

Declaration of competing interest

None of the authors have potential conflicts of interest to be disclosed.

Ethical approval/Informed Consent

Written informed consent was obtained from the patient who participated in this case.

Availability of data and materials

All data generated or analyzed during this study are included in this published article.

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