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Case Report

Rectal prolapse in systemic sclerosis: a rare but demanding surgical scenario

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ABSTRACT

Rectal prolapse is a relatively common gastrointestinal manifestation in patients with systemic sclerosis. However, its surgical repair in this group of patients requires special consideration due to its association with a high rate of failure and recurrence. We present the case of a 57-year-old woman with systemic sclerosis and grade V Oxford rectal prolapse, successfully resolved through laparoscopic ventral rectopexy. There was follow up for two years with no evidence of recurrence. There are few documented cases of surgical repair in patients with systemic sclerosis, and this is the first reported case of successful repair using this surgical technique. Given the above, the documentation of this case provides a valuable reference for physicians encountering this rare condition associated with a high recurrence rate.

Keywords: Ventral mesh rectopexy, Rectal prolapse, Systemic sclerosis, Case report

INTRODUCTION

Systemic sclerosis is a rare autoimmune disease characterized by non-selective fibrosis. Gastrointestinal involvement is present in 90% of the cases, with up to 70% presenting anorectal disfunction, which is associated with muscular dystrophy and collagen alterations, likely representing the underlying pathophysiological mechanisms.[1-3]

Rectal prolapse and incontinence warrant special attention in patients with this condition, primarily due to their high-rate recurrence after surgical repair compared to patients without the disease.

Laparoscopic ventral mesh rectopexy, as described by D'Hoore, consists in purely anterior dissection, avoiding potential complications from a posterior rectal dissection, improving fecal incontinence up to 82% and reporting prolapse recurrence in 0-15%, proving to be superior to other techniques.[5,6]

To date, no cases of surgical repair of rectal prolapse in patients with scleroderma using this technique have been reported. Therefore, we present this case report, which describes the successful restorative procedure with no evidence of prolapse recurrence or persistent incontinence.

CASE REPORT

A 57-year-old female patient diagnosed with systemic sclerosis, with a history of four vaginal deliveries, two episiotomies and an unspecified hysterectomy. Patient states to start her current condition presenting constipation and posteriorly evolving to fecal incontinence (Wexner 16 pts), rectal tenesmus, a sensation of a foreign body in the anal canal, and rectal prolapse requiring digital reduction. Over time, the prolapse became irreducible and was associated with mucosal bleeding. On physical examination, complete rectal prolapse and weakness of the sphincteric complex were observed (Figure 1). Based on these findings, a laparoscopic ventral mesh rectopexy was indicated.

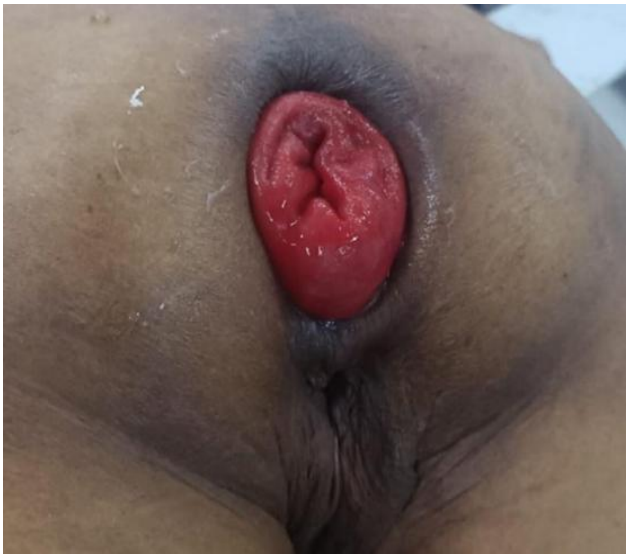

Figure 1: Grade V rectal prolapse according to the Oxford classification is illustrated.

Technique description

Patient in supine position. General anesthesia is performed. A 12 mm supraumbilical laparoscopic port is placed and used to create pneumoperitoneum to 14 mmHg. During diagnostic laparoscopy, rectum prolapse is evident. Three additional 5 mm laparoscopic ports are placed in the right flank and both iliac fossae. The sigmoid colon is mobilized cephalad; the peritoneal reflection is incised using monopolar energy and mesorectal dissection along the anterior rectal wall is performed using ultrasonic energy with a harmonic scalpel. Vaginal examination is performed to delimit the dissection of the rectovaginal septum, releasing the rectum down to the levator ani muscles. Once the dissection is done, the longitudinal anterior ligament of the sacrum is exposed, which will later be used for fixation of the polypropylene mesh. The polypropylene mesh is introduced and subsequently fixated to the anterior wall of the rectum and the longitudinal anterior ligament. Finally, the peritoneal flap is reapproximated to avoid mesh exposure (Figure 2).

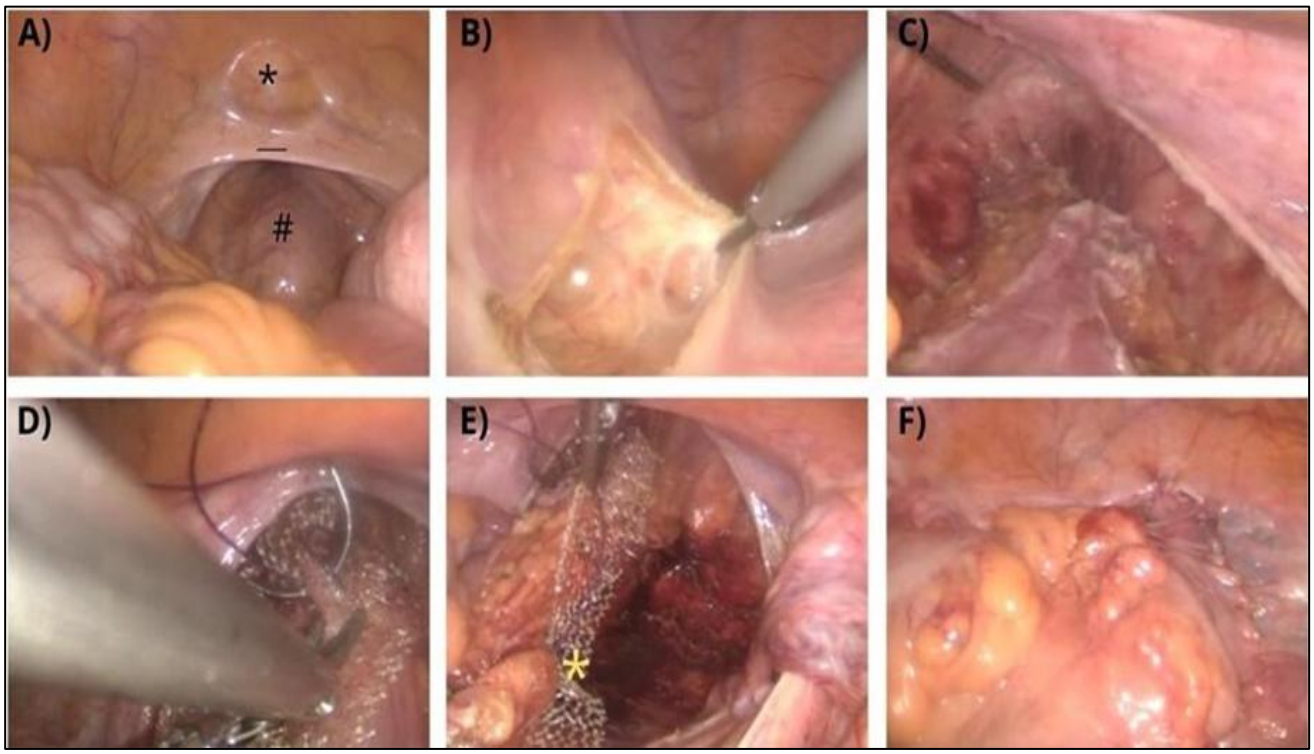

Figure 2 (A-F): A-Pelvic cavity is illustrated: urinary catheter balloon (*), vaginal vault (-), rectum (#). B- Creation of the peritoneal flap. C-Mesorectal dissection. D-Mesh fixation to the anterior wall of the rectum. E-Mesh fixation to the anterior longitudinal ligament (*) and F-Closure of the peritoneal flap.

The patient was followed up for 24 months, during which no recurrence of rectal prolapse was observed, along with an improvement in fecal continence (Wexner 3 pts). The patient was discharged following this follow-up period.

DISCUSSION

The relevance of the present case report lies in the high recurrence rate of rectal prolapse after surgical treatment, whether via abdominal or perineal approach, among patients diagnosed with systemic sclerosis, and in highlighting the limited information available regarding the standard management of these complex cases. According to Kahana et al there were six documented cases in British literature, along with three additional cases from their own experience.[4] They concluded that the most successful alternative in surgical management is represented by low anterior resection with permanent end

colostomy, as opposed to restorative surgery, due to the high recurrence rate.[4]

Nonetheless, this case demonstrates the successful outcome of restorative surgical treatment via ventral mesh rectopexy, which suggests that Kahana et al conclusions could be premature, considering the limited number of reported cases.[4] Although the follow-up period in this case was only two years, similar to those reported by Leighton et al and Petersen et al continued documentation is essential to promote the reporting of further cases, which would help expand the sample size and enable the development of more representative conclusions.[7,8]

CONCLUSION

We concluded that ventral mesh rectopexy, widely recognized for its favorable outcomes in the general population, remain unprecedented in patients with systemic sclerosis. Given the high failure rates associated with restorative procedures and the positive outcomes observed in this case, its inclusion in the literature represents a valuable contribution to the existing evidence. Furthermore, compiling similar case series could facilitate understanding of the relationship between systemic sclerosis and the high rates of surgical recurrence in this specific patient population.

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