VIDEO ARTICLE
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Transvaginal Evisceration Six Months After Sex Sparing Robotic Cystectomy: A Case Report

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Abstract

Transvaginal evisceration is a rare yet serious complication following pelvic surgery. This report presents the case of a 69-year-old woman with high-grade bladder carcinoma, unresponsive to Bacillus Calmette-Guérin, who underwent sex-sparing robotic-assisted radical cystectomy (RARC), with intracorporeal ileal conduit reconstruction. The procedure involved complete preservation of the vagina, uterus, fallopian tubes and ovaries. Seven months postoperatively, the patient presented with transvaginal evisceration of the omentum and bowel, requiring emergent surgical repair. To the best of our knowledge, this is the first report of such a rare late complication after sex-sparing RARC.

Keywords: General urology, reconstructive urology, urooncology

Introduction

Robotic-assisted radical cystectomy (RARC) is a preferred approach for high-grade, muscle-invasive, and Bacillus Calmette-Guérin (BCG)-unresponsive non-muscle-invasive bladder carcinoma, offering enhanced precision, reduced blood loss, and shorter recovery times compared to open techniques (1,2). However, RARC in female patients poses unique postoperative risks, notably pelvic floor complications. Sex sparing radical cystectomy in the female is expanding its indications, particularly in cases where the preservation of sexual and urinary function is prioritized without compromising oncological outcomes. Data indicate that organ- and nerve-sparing techniques contribute to improved quality of life outcomes by maintaining enhanced urinary continence rates, reducing the frequency of intermittent catheterization, and preserving sexual function postoperatively (3). Vaginal wall dehiscence is a rare and serious complication that significantly increases the risk of transvaginal evisceration, a critical complication characterized by herniation of intra-abdominal viscera through the vaginal canal (4,5). Postoperative vaginal dehiscence represents a significant surgical complication, as it results in a loss of anatomical integrity of the pelvic floor, exposing the patient to a markedly increased risk of delayed transvaginal evisceration.

We present the case of a 69-year-old woman with high-grade bladder cancer unresponsive to BCG who underwent sex-sparing RARC with intracorporeal ileal conduit urinary diversion. Six months after surgery, the patient developed vaginal wall dehiscence and subsequent transvaginal evisceration, necessitating emergency surgical repair. This case highlights the critical need for individualized intraoperative management and stringent postoperative surveillance to mitigate risks associated with delayed pelvic floor complications in similar patients.

Case Presentation

A 69-year-old female patient with high-grade non-muscle-invasive bladder carcinoma, unresponsive to BCG therapy, presented with recurrent high-grade bladder tumors. The patient underwent multiple transurethral resection of bladder tumors (TURBTs) in 2023 for persistent high-grade lesions. In December, cystoscopy revealed multifocal tumors at the bladder neck and trigone, with left ureteral involvement, and a final TURBT confirmed recurrent high-grade carcinoma. Further diagnostic workup included a contrast-enhanced computed tomography (CT) scan of the abdomen and pelvis, which confirmed bladder wall thickening and suspicious lesions in the posterior bladder wall and trigone, suggestive of extensive disease.

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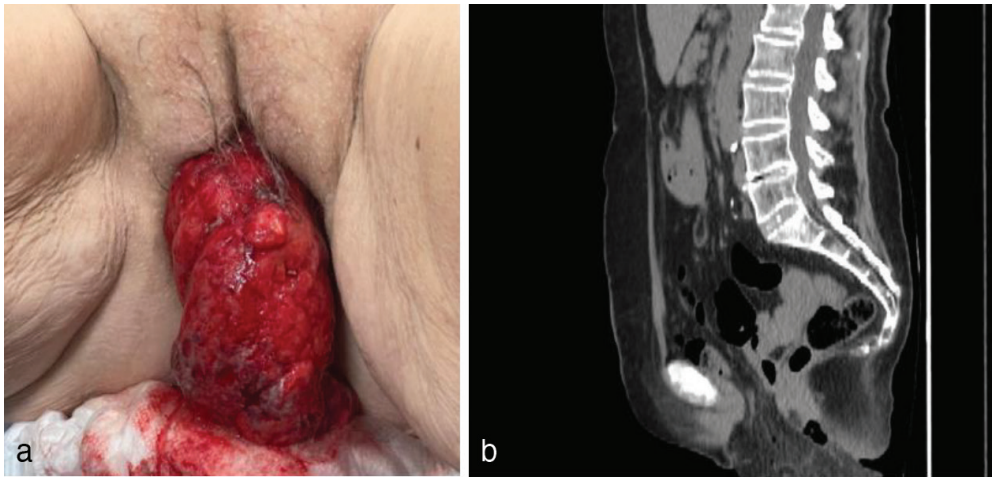

Figure 1. (a). Small bowel protrusion through the vagina on physical examination, (b). Computed tomography image showing small bowel herniation through the vagina (sagittal slice)

Given the failure of conservative approaches and the high risk of progression, a multidisciplinary team recommended proceeding with RARC.

Surgical Technique

Sex sparing RARC was performed in February 2024. As the patient was sexually active, a complete sex sparing approach with preservation of the ovaries, fallopian tubes, uterus, and anterior vaginal wall was performed. Following demoltion, an intracorporeal urinary diversion with an ileal conduit was performed, following extensive informed discussion with the patient in the preoperative setting, the procedure was uneventful with a console time of 200 min and total operative time of 250 min. Estimated blood loss was 100 mL, and no intraoperative complications were observed.

Postoperative Course and Follow-up

The patient's immediate postoperative course was marked by the displacement of one ureteral stent, with a consequent acute renal insufficiency and paralytic ileus. The complication responded to removal of the displaced stent and medical therapy (Clavien II). The patient was discharged in good health on 11th post-operative day. Final pathologic analysis revealed pT1N0 sec. The American Joint Committee on Cancer 8th edition. A follow-up CT scan showed no abnormalities at 3 months after surgery.

Although not having begun vaginal sexual activity, the patient was admitted to the ER seven months after surgery for vaginal discharge. Physical examination revealed complete evisceration of the omentum, confirmed by abdominal CT scan (Figure 1). Emergent surgical resection of the omentum, reduction of the evisceration, and transvaginal repair of the defect were performed. The vaginal defect was closed with a two-layer Vicryl 2/0 suture.

The patient recovered well and post-operative controls at 4 and 8 weeks confirmed adequate consolidation of the vaginal defect.

Discussion

The sex-sparing approach in RARC is designed to optimize oncologic control while preserving pelvic structures, which is particularly important in carefully selected patients with high-grade, BCG-unresponsive bladder cancer who have tumors confined to the bladder without involvement of the bladder neck or trigone. This approach is indicated for younger patients who are sexually active or have a strong preference for maintaining pelvic function. The main advantage of the sex-sparing RARC is the preservation of the anterior vaginal wall, uterus, ovaries, and neurovascular structures, which helps maintain both urinary continence and sexual function. Investigators have reported that this approach leads to high continence rates (over 90% for both daytime and nighttime) and allows a significant proportion of patients to remain sexually active at one year postoperatively (6,7).

Despite these benefits, the sex-sparing technique is not without its challenges. The preservation of pelvic organs can increase the risk of specific vaginal complications, including dehiscence and transvaginal evisceration, although the latter is rare. Vaginal dehiscence can compromise the structural integrity of the pelvic floor and, if left undetected or untreated, may lead to severe complications such as the evisceration of abdominal organs. This case is unique because the evisceration occurred seven months postoperatively, which is a delayed presentation compared to the typical early postoperative period (6,7). We are unable to identify a single factor that contributed to the evisceration presented by our patient. The minimal incision of

the vagina, sutured perioperatively as seen in the Video 1, is unlikely to have caused a massive dehiscence after 7 months. Possibly, a reduction in blood flow to the vaginal wall may have contributed, although the tissues did not appear necrotic or ischemic during surgical repair. Our patient denied sexual trauma.

The rarity of this case highlights the importance of individualized surgical planning and vigilant long-term follow-up in patients undergoing sex-sparing RARC. While preserving pelvic structures can enhance postoperative quality of life, it is crucial to balance this with the risk of late-onset complications. This case suggests that transvaginal evisceration presents as a delayed complication, highlighting the need for continuous monitoring and timely surgical intervention when necessary to prevent life-threatening outcomes (5,6).

Conclusion

This case report demonstrates a rare late complication of sex-sparing RARC in the female. Although infrequent, this serious complication demands attention by the clinician and should be suspected in cases of vaginal discharge after RARC, even months after full surgical recovery. To the best of our knowledge, the present case is the first documented case of such a complication in sex-sparing RARC.

Video 1.

Ethics

Informed Consent: Verbal and written informed consent was obtained from the patient for the study.

Footnotes

Authorship Contributions

Surgical and Medical Practices: E.F.A., S.A., Concept: F.D.R., E.F.A., S.A., Design: F.D.R., E.F.A., S.A., Data Collection or Processing: G.C., Analysis or Interpretation: E.R., F.D.R., Literature Search: G.C., E.R., Writing: G.C., E.R.

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