

# Vaginal Evisceration Following Anterior Pelvic Exenteration

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## Abstract

Vaginal evisceration of bowel is an rare complication<sup>1,2</sup>. Approximately 80 cases have been documented in world literature<sup>1</sup>. Bowel evisceration is more commonly seen in postmenopausal women<sup>1,2</sup> and is well documented complication of operations for gynecological malignancies, and pelvic exenteration<sup>2</sup>. There are very few reports of this complication occurring following anterior exenteration for carcinoma bladder in female<sup>3,4</sup>. We hereby report a case of transitional cell carcinoma of the bladder who presented with bowel prolapse through the pelvic floor, a month after anterior exenteration and ileal conduit urinary diversion. The case is being reported to impress upon the need for a thorough pelvic floor repair in cases of pelvic exenteration.

## CASE REPORT

A 51 year old female underwent anterior exenteration with ileal conduit for muscle invasive, urothelial carcinoma of the bladder. Urethrectomy was performed and the defect was closed. The post operative period was uneventful. A month later, she presented to the emergency department with history of acute abdominal pain and a mass descending per vagina following a violent bout of coughing. On examination, patient was dehydrated, tachycardiac and hypotensive. Abdominal examination revealed a scaphoid abdomen with an ileal conduit functioning well. Examination of the perineum revealed prolapse of a 30-cm segment of small bowel through the vaginal introitus (fig1.). The bowel loops were seen to be congested, but not gangrenous. Vaginal introitus was narrow. Reduction of contents through the pelvic floor back into the peritoneal cavity was not attempted as the bowel loops were edematous and vaginal opening was very narrow. The patient was resuscitated and emergency laparotomy was done by a lower midline incision. The prolapsed contents were returned back into the peritoneal cavity. The bowel loops were viable and there was a small laceration of the distal ileum which had to be resected, and an end to end anastomosis was done. Pelvic floor repair was done in 2 layers which was reinforced with a prolene mesh secured to the lateral pelvic walls and the vaginal walls. The ileal conduit was functioning well and the ureteric stents were removed. The patient had an uneventful recovery.

## Figure 1

Fig 1: Congested, edematous, prolapsed small bowel loops with Ileal conduit.



## DISCUSSION

Transvaginal bowel evisceration is a rare life threatening situation needing immediate attention. As reviewed by Kowalski et al., transvaginal bowel evisceration is more commonly seen in elderly postmenopausal women.<sup>2</sup> This may be attributed to the fact that postmenopausal vaginal wall is thin, scarred and shortened with diminished vascularity which makes it more prone to rupture. The risk factors for evisceration for premenopausal women include trauma due to coitus, rape, obstetric procedures, or foreign-body insertion<sup>4</sup> and postmenopausal women risks are older age, previous vaginal surgery, enterocele repair, a sudden increase in intra-abdominal pressure (i.e. straining, coughing, defecating) and medical conditions which predispose to inadequate wound healing<sup>1,2</sup>. Other risk factors include history of irradiation, abdominal or vaginal hysterectomy<sup>2</sup>, perineal proctectomy<sup>1</sup> and is rarely known to occur spontaneously<sup>1</sup>. Spontaneous rupture is commonly occurs at the posterior fornix.

The plausible explanation for this event can be attributed to any departure from the normal state in the maintenance of normal pelvic pressure distribution. The upper vaginal axis in normal circumstances is directed parallel to the levator plate and perpendicular to the direction of intra-abdominal pressure. Alteration in the above mentioned anatomical relationship during surgery may alter the normal axis of the vagina; hence the vagina assumes a more vertical position. As a result, raised intra-abdominal pressure would now be directed at an axis parallel to the vaginal vault, thus making it vulnerable to rupture.

Anterior exenteration in the female is analogous to radical cystectomy in the male and is performed for transitional cell carcinoma of the bladder<sup>2</sup>. The procedure involves initial lymphadenectomy and inspection of the peritoneal contents, followed by removal of the bladder, uterus, ovaries, fallopian tubes, anterior vaginal wall and urethra en bloc. So there is a need for pelvic floor repair in these patients.

It is also important to differentiate between a supra and infra levator pelvic dissection. The benefit of supralelevator exenteration is the preservation of the pelvic floor musculature, whereas the infralelevator exenteration leaves a large gap in the pelvic floor, requiring reconstruction with tissue substitutes or synthetic mesh. Reconstruction following infralelevator exenteration is significant in avoiding the major risk of pelvic organ prolapse and bowel fistulas. Synthetic mesh or duramater is then sewn to the pelvic side walls to create a firm base at the pelvic floor. This layer then has to be covered with an omental pedicle flap or peritoneum to prevent adhesions of small bowel to these structures. Narducci et al. have described successful laparoscopic and vaginal approach with the use of omental patch<sup>6</sup>.

Our patient had multiple risk factors for pelvic organ prolapse. She was multiparous with 3 full term normal vaginal deliveries, postmenopausal and cachectic with poor pelvic muscle tone. Omental or peritoneal pedicled flaps were not used. A combined abdominal and vaginal approach allows for better assessment of adjacent structures and the involved viscus. The management for bowel evisceration is reduction of contents followed by reconstruction. Management of the prolapsed loops after reduction into the peritoneal cavity depends on the nature and viability of the herniated structures, the approach used and surgeon preferences.

Management of the pelvic floor requires meticulous closure

of the tissues available locally followed by reinforcement with synthetic material. Necrotic tissue, if present, around the vaginal defect and stumps of the supporting ligaments should then be excised and the defect closed with absorbable suture material. On the contrary, Nichols and Randall suggested that delayed evaluation of the pelvic support followed by appropriate repair is preferable to immediate repair<sup>4</sup>. There is also a mention in one of the literature where it was advised to leave the defect open for secondary suturing transvaginally if the edges are not healthy enough to support healing<sup>6</sup>. However, we recommend early management as it shows better results. Recurrences of bowel evisceration have been described.

Prevention of recurrence depends on the pelvic floor reconstruction techniques. The principles of prevention include a) restoration of normal vaginal axis b) anastomosis of the stumps of the supporting ligaments of the pelvis to the angles of the vagina c) preservation of vaginal length and d) maintenance of vaginal integrity with application of estrogen if necessary<sup>2</sup>.

## **CONCLUSION**

Pelvic exenteration surgery in elderly females carries a risk of this rare but serious complication due to multiple risk factors such as poor pelvic support, hormonal status and technical reasons. Effective management involves resuscitation followed by reduction of contents into the peritoneal cavity followed by a good pelvic floor repair. The onus, however, must be on prevention of this rare complication whenever risk factors are present.

## **References**

1. O'Brien LM, Bellin LS, Isenberg GA, Goldstein SD. Spontaneous transvaginal small-bowel evisceration after perineal proctectomy: report of a case and review of the literature. *Dis Colon Rectum*. 2002;45:698–699.
2. Kowalski LD, Seski JC, Timmins PF, Kanbour AI, Kunschner AJ, Kanbour-Shakir A. Vaginal evisceration: presentation and management in postmenopausal women. *J Am Coll Surg*. 1996 Sep;183(3):225–229.
3. Marshall FF, Treiger BFG. Radical cystectomy (Anterior Exenteration) in the female patient. *Urol Clin North Am*. 1991; 18(4):765–775.
4. Kandirali E, Tefekli A, Ozcan F. Vaginal Evisceration: A rare complication following radical cystectomy in female. *Marmara Medical Journal*. 2004; 17(3):137–139.
5. Brunschwig A: Complete excision of pelvic viscera for advanced carcinoma. *Cancer* 1948;1:177–183.
6. Narducci F, Sonoda Y, Lambaudie E, Leblanc E, Querleu D. Vaginal evisceration after hysterectomy: the repair by a laparoscopic and vaginal approach with an omental flap. *Gynecol Oncol*. 2003;89(3):549–551.

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