

# An Unusual Case of Bowel Evisceration after Sneezing

Jason Jones\*, Alicia Buck, Jeffrey Adams, Anthony Meyer

Department of Emergency Medicine, University of Florida, Gainesville, FL, USA

\*Corresponding author: [jasonjones@ufl.edu](mailto:jasonjones@ufl.edu)

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**Abstract** Evisceration is a rare complication of abdominal surgery. This case report describes small bowel evisceration through a healed cystectomy surgical site after sneezing and coughing. Perspectives from the emergency responders, the patient, and his surgeons are discussed. When evisceration occurs, patients may be unsure of how to protect their exposed intestines. First medical responders may experience anxiety with initial management due to a distressing presentation and unfamiliarity with the condition. Surgeons must carefully protect the bowel, reduce it into the abdomen, inspect it for injury, prevent infection, and repair the dehiscenced wound

**Keywords:** Bowel evisceration, cystectomy, complication, emergency medical services, sneezing, coughing

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## 1. Introduction

Cystectomy is a surgical procedure to remove the entire urinary bladder, typically performed for bladder cancer, which accounts for 3% of all cancers worldwide [1,2]. A 2019 Cochrane review described radical cystectomy with urinary diversion as "the gold standard surgical treatment" for invasive bladder cancer [3]. An estimated 5 to 8% of cystectomy cases are performed for non-cancer reasons, including radiation cystitis and refractory incontinence [4]. Open radical cystectomy is a complex procedure, with one study reporting a complication rate of 64% within 90 days [5]. Though wound dehiscence is a known post-operative complication, bowel evisceration through the abdominal wall after cystectomy has rarely been reported.

In this case report, we describe a spontaneous bowel evisceration through a cystectomy incision site occurring 15 days after surgical closure.

## 2. Case Presentation

A 63-year-old man was eating breakfast with his wife at a diner. He had a history of prostate cancer treated with robotic-assisted laparoscopic prostatectomy 9 years prior to the event. Despite the surgery, he was found to have biochemical recurrence (persistent elevation of Prostate Specific Antigen), which was treated with several months of salvage radiation therapy. This therapy induced radiation cystitis, causing episodes of gross hematuria resulting in bilateral hydronephrosis. Fifteen days prior, the patient underwent operative treatment for these conditions: open cystectomy with bilateral uretoileal conduit diversion. The surgery was successful, and he was discharged home in good condition. On the morning of the

event, he returned to Urology clinic, where his wound appeared well-healed and the overlying staples were removed. He and his wife went to breakfast to celebrate.

During breakfast, the man sneezed forcefully, followed by coughing. He immediately noticed a "wet" sensation and pain in his lower abdomen. Looking down, he observed several loops of pink bowel protruding from his recent surgical site. He later related that he was unsure of how to proceed, so he covered the exposed intestines with his shirt. He initially decided to drive himself to the hospital, but concerned that changing his position might injure his bowel, his wife requested an ambulance.

An advanced life support ambulance arrived at the diner 4 minutes after being requested for a "laceration with exposed bowel." After removing a fluid-soaked shirt, the paramedic noted an approximately 3 inch (7.6 cm) vertical laceration with "large amounts of bowel" protruding through it (Figure 1). Only minimal bleeding was seen.



Figure 1. Illustration of initial abdominal examination

The paramedic described that she was initially unsure of the best treatment, as her medical protocols did not have specific guidelines for treating evisceration. She

briefly considered manually reducing the exposed bowel back into his abdomen under sterile technique, but declined due to concerns that this might injure the bowel. She remembered watching two lectures about penetrating trauma and gastroschisis that both recommended keeping exposed bowel moist. In response, she covered the intestines with an abdominal pad moistened with saline, securing it in place by wrapping gauze roll around the entire abdomen. She inserted an IV and administered fentanyl and ondansetron before arriving at the hospital.

In the Emergency Department, the Urology service was consulted immediately. Vital signs were within normal limits. Pre-operative blood tests were obtained and noted to be unchanged from recent comparisons. A nasogastric tube was inserted, and the patient consented to receive an exploratory laparotomy.

In the operating room, the patient received pre-operative antibiotics (vancomycin and piperacillin / tazobactam) and general anesthesia with endotracheal intubation. The patient was placed supine, prepped, and draped. Three Urologic surgeons carefully reduced the eviscerated bowel back into the abdominal cavity. They inspected the full length of the small bowel and noted no evidence of injury. The peritoneal cavity was irrigated with normal saline and a gentamicin solution. The suture line was noted to have dehisced at its center and was closed with a variety of sutures, including: interrupted, figure-of-eight, vertical mattress, and internal retention sutures. Two Jackson-Pratt surgical drains were placed into the abdominal cavity for fluid collection. The skin was then closed with staples, and a negative-pressure wound vacuum was applied.

The patient was weaned from sedation and extubated in the post-anesthesia care unit. Over several days, the patient's pain was controlled with IV analgesia, his wound vacuum and tubes were removed, and his diet was slowly advanced to a regular diet. He was discharged on post-operative day 6 in good condition, with a reassuring abdominal examination (Figure 2). The final discharge diagnosis from his surgeons was "evisceration."

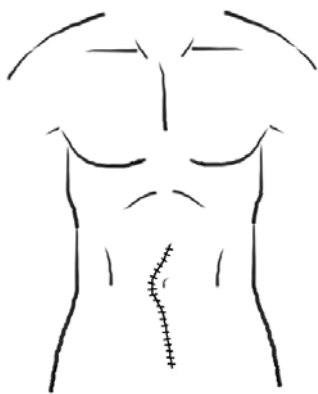


Figure 2. Illustration of abdominal examination after surgical repair

### 3. Discussion

Wound dehiscence is a well-described complication of open cystectomy. A 2023 meta-analysis of 772 radical

cystectomy cases reported an overall post-operative wound dehiscence rate of 6.9%, with individual studies ranging between 0% and 27% [6]. A 2016 review of 1,776 open cystectomy cases identified chronic obstructive pulmonary disease (COPD) and a high body mass index as the two independent predictors of wound dehiscence [7]. Our patient has neither of these conditions. Nevertheless, in that study, COPD was felt to be a risk factor because it causes coughing, which can induce wound dehiscence or evisceration by forcefully raising intraabdominal pressure. Coughing was likely the cause in our case.

While wound dehiscence is a well-known complication, this case is important because *evisceration* through the abdominal surgical site after cystectomy is poorly described in the medical literature. A PubMed search for "cystectomy AND evisceration" performed in May 2024 provided only 7 results related to evisceration through the abdominal wall after cystectomy.

In this case, the responding paramedic did not have a protocol for treating evisceration. Emergency Medical Services medical directors might consider incorporating the guidelines for abdominal evisceration published by Tactical Combat Casualty Care, including: control visible bleeding, address gross contamination by rinsing the bowel with sterile saline or sterile water, cover the exposed bowel with a "moist, sterile dressing or a sterile water-impermeable covering," and irrigate these dressings as needed with additional sterile fluid [8].

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