

Four Cases of Entero Pouch Fistula After Orthotopic Neobladder

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INTRODUCTION

Radical cystoprostatectomy in the male patients and anterior pelvic exenteration in the female patients, coupled with en bloc pelvic lymphadenectomy, remain the standard surgical approaches to muscle-invasive bladder carcinoma in the absence of metastatic disease. Entero pouch fistula is a rare complication of orthotopic neobladder. The development of neobladder-enteric fistulas after orthotopic bladder reconstruction has been reported in large series of patients.⁽¹⁻⁶⁾ In the absence of infection, sepsis, or fecaluria, a trial of conservative management with a low residue diet and prolonged catheter drainage are recommended before proceeding to operative repair.^(7,8) However, there are few articles on the management of entero pouch fistulas in the literature.⁽¹⁻⁴⁾ In this study, we presented 4 cases with poor response to conservative management.

CASE REPORT

All the cases were male patients suffering from muscle invasive bladder cancer. They had undergone orthotopic urinary diversion using 30 to 40 cm of the ileum. A vesicoenteric fistula developed as early as 8 days to as late as 2 months after the procedure. All of the cases were admitted and diagnosed

using computed tomography (CT) cystography and oral activated charcoal test. After confirming the fistula, patients were treated conservatively by total parenteral nutrition (TPN), antibiotic therapy, and continuous catheter drainage.

Case 1

A 67-year-old man underwent radical cystectomy. On the 8th postoperative day, while the patient was on normal diet and had no abdominal symptom or defecation problem, fecal materials were found in the urine. Upper gastrointestinal (GI) series and CT scan with oral contrast were not diagnostic. Thereafter, we used oral activated charcoal to confirm the fistula. After 10 days, in spite of fasting, TPN, antibiotic therapy, and continuous catheter drainage, the patient was still symptomatic. Since the patient's condition was deteriorating, open surgery was performed. We could not find a fistula during the operation; hence, pouch resection and ileal conduit diversion were carried out. The patient was discharged with a stable condition after 10 days.

Case 2

A 70-year-old man had undergone ileal orthotopic pouch neobladder reconstruction. Thirty days after the operation, the patient returned

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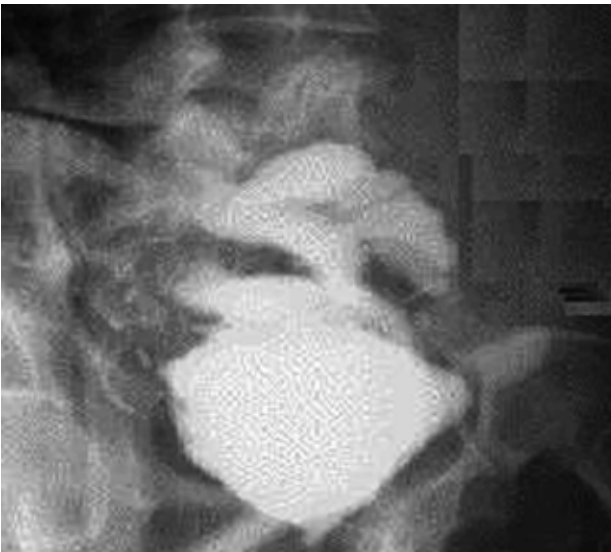


Figure 1. Pouchography shows vesicoenteric fistula.

with fecaluria. Retrograde pouchogram showed an entero pouch fistula (Figure 1). The patient was treated with continuous neobladder drainage, oral fluoroquinolones, and TPN. After 12 days, the patient's condition suddenly deteriorated and he died with septic shock.

Case 3

A 48-year-old man had undergone radical cystectomy. Two months after the operation, the patient returned with fecaluria. Retrograde pouchogram was not diagnostic, but oral activated charcoal test confirmed the fistula. Total parenteral nutrition, prolonged catheter drainage, and oral fluoroquinolones were administered for 10 days, but oral activated charcoal test was still positive. The patient was discharged with low residue diet, prolonged catheter drainage, and oral fluoroquinolones. However, after 2 months of conservative management, feces materials were still visible in the urine bag. Upper GI series and pouchogram were not diagnostic. Performing surgery via previous surgical scar (lower midline), all adhesion bands were released and fistula was repaired. After 3 weeks, oral activated charcoal test became negative and the patient was discharged.

Case 4

A 56-year-old man had undergone radical cystectomy and orthotopic urinary diversion in



Figure 2. Pouchography in a patient suspected for entero pouch fistula.

another center. After 2 weeks, when the patient was ready to be discharged, he noticed fecal materials in his urine. He was referred to our center and pouchography revealed an entero pouch fistula (Figure 2). We recommended surgery, but the patient refused. After 4 months, the patient is still under antibiotic therapy, low residue diet, and neobladder drainage. He is still symptomatic and repeated pouchography confirmed the fistula persistence.

DISCUSSION

Orthotopic bladder substitution is an effective and desirable method of urinary reconstruction after radical extirpative procedures. Although it is rare, fistula formation can occur either as an early or late complication, and is seen more frequently in patients treated with radiation.⁽¹⁾ Conduits and pouches can open to nearly all the surrounding

pelvic structures, including the small bowel, the colon, the rectum, the vagina, and the iliac vessels. In review of literature, conservative therapy with a low residue diet and continuous catheter drainage of the reservoir are recommended. Surgical excision of the fistula is necessary if conservative therapy fails.^(1,2,5,6) Interposition of the omentum between the pouch and the entero-colonic anastomosis is recommended in patients who have previously received pelvic radiation.⁽¹⁾

In a study, the conservative management was proposed in cases who had a normal nutritional status, with no sepsis, no obstruction, and no organ impairment. The treatment consisted of hyperalimentation, fasting or low residue diet, and continuous urinary drainage.⁽⁶⁻⁸⁾ Although it is not required for the diagnosis of an entero pouch fistula, hyperchloremic metabolic acidosis should raise clinical suspicion of fistula in the presence of GI symptoms, especially when there has been no previous metabolic abnormality.⁽¹⁾

In this study, conservative management using TPN, antibiotic therapy, and catheter drainage for 10 days was not successful to be recommended. Two of the patients underwent surgery, the third case died of septic shock, and the fourth one is still symptomatic after 4 months of conservative management. We believe that open surgery should not be postponed, especially when the patient is deteriorating.

When there are suspicious materials in the urine or hyperchloremic metabolic acidosis exists, entero pouch fistula should be ruled out. In this study, of 4 patients, only 2 had diagnostic pouchogram, and upper GI series yielded inconclusive results. Therefore, other diagnostic modalities like oral activated charcoal test must be utilized. We administered oral activated charcoal and then observed urine for black material to confirm entero pouch fistula in suspicious cases.⁽⁸⁾

Recently, magnetic resonance imaging has been introduced as an effective method to detect fistula and determine its location.⁽⁹⁾

Examining the anastomotic site and then all sites of adhesion between the intestine and pouch with high intraluminal pressure during the operation is an effective method to detect fistula opening in the intestine. Actually, finding fistula is a challenging part of this surgery.

CONFLICT OF INTEREST

None declared.

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