An Unexpected Reason of Urinary Leakage After Radical Cystectomy and Orthotopic Urinary Diversion

Radikal Sistektomi ve Ortotopik Üriner Diversiyon Sonrası Tahmin Edilemeyen Üriner Kaçak Nedeni

Radikal Sistektomi Sonrası Üriner Kaçak / Urinary Leakage After Radical Cystectomy

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Özet

Lokal invaziv mesane kanseri (transizyonel hücreli) olan (grade III/III) 73 yaşında bir hastayı sunuyoruz. Hastaya neoadjuvan kemoterapi sonrası bilateral pelvik lenf nodu diseksiyonu, radikal sistektomi ve Studer poş operasyonu yapıldı.Abdominal dren olarak kullanılan foley kateterin poşa migrasyonu sonrası büyük ve persistan üriner kaçak meydana geldi.

Anahtar Kelimeler

Mesane Kanseri; Radikal Sistektomi ve Üriner Diversiyon; Üriner Kaçak

Abstract

We report a 73-year-old man with locally invasive transitional cell carcinoma of the bladder (grade III/III). The patient was treated initially with multidrug chemotherapy, underwent bilateral pelvic lymph node dissection, radical cystectomy, and creation of a Studer pouch. A large and persistent urine leakage caused by a Foley catheter used as an abdominal drain migrated into the created pouch.

Keywords

Bladder Cancer; Radical Cystectomy and Urinary Diversion; Urinary Leakage

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Introduction

Radical cystectomy and urinary diversion is standard treatment for muscle-invasive and stage Ta/T1/Tis bladder cancer when local therapies have failed [1]. Complications resulting from the uretero-intestinal anastomosis are not uncommon and may have serious consequences. Post-operative pouchograms are commonly performed in many centers to rule out urinary extravasation before pouche activation however many experiences have indicated that routine pouchogram may not be particularly helpful nor alter management in most patients [2]. We present a case of a prolonged urinary leakage after radical cystectomy and orthotopic urinary diversion.

Case Report

A 73-year-old man with locally invasive transitional cell carcinoma of the bladder (grade III/III), treated initially with multidrug chemotherapy, underwent bilateral pelvic lymph node dissection, radical cystectomy, and creation of a Studer pouch. Final pathological examination revealed a high grade papillary urothelial carcinoma and reactive lymphoid hyperplasia. The drain and ureteral catheters were removed at the fourth and eighth postoperative days, respectively. However drainage from the entries of these catheters and incision line have continued (approximately 500 cc per day). Oral feeding was stoped at the twelfth postoperative day and total parenteral nutrition was started on the same day after observing intestinal secretions within the catheters. The patient reoperated at the twenty eighth day and a 1 cm opening at the anastomosis line and another 1 cm opening at the left side of the pouche were observed. Ileal resection and ileal reanastomosis were performed. The opening at the pouche was closed primarily. The operation was finished with the insertion of a drain.

The leakage from the drain was approximately 100 cc per day but increased suddenly up to 600 cc at the sixth day after the second operation and gradually to 2400 cc at the tenth day. A pouchogram was performed which showed the drain migrated into the pouche (Figure 1. A-B). The drain was removed and the patient was discharged home with a Foley catheter at the thirty eighth postoperative day.

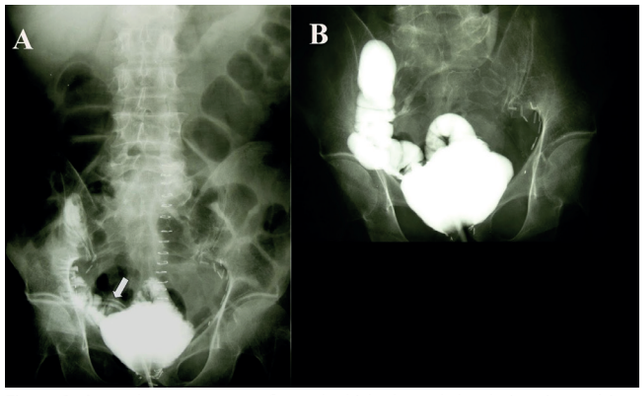


Figure 1. A pouchogram was performed which showed the drain migrated into the pouche (A,B)

Discussion

Orthotopic bladder substitution is an effective and desirable method of urinary reconstruction after radical extirpative procedures. In addition to the general adverse sequelae common to all major abdominal operations, there are complications spesific to neobladder formation, including uretero-ileal stricture, urethro-ileal stricture, upper tract deterioration, and urinary leak [1, 3]. The most common early diversion related complication was urinary leakage, occuring in 1.9 to 5.5% of cases in most large series [4]. Persistent urinary leakage from the reservoir generally resolves with adequate urethral drainage. Temporary nephrostomy tube placement may be neccessary in patients with urinary leakage [5].

In many centers, routine postoperative radiologic studies are performed to evaluate the ureterointestinal, urethrovesical, and pouch suture lines [6]. However no guidelines are available regarding the optimal timing of when to perform these studies or whether it is routinely necessary. Some groups perform pouchograms on the tenth postoperative day, while others perform between 2 and 3 weeks postoperatively [7]. Pantuck et al. reported the incidence of leaks and complications in 51 patients who underwent routine urograms at thirteenth postoperative day [8]. One patient had a silent leak and nine had complications, mainly urosepsis, which may have been related to the urograms.

Large and persistent urine leaks cause clinical signs and symptoms that are suggestive of urinary extravasation. Some of these signs and symptoms include ileus, abdominal pain, elevated drainage output or elevated blood urea nitrogen and creatinine levels. Computed tomography of the abdomen and pelvis may help for diagnosing suspected leaks and drainage of the collection and/or urine diversion using percutaneous techniques may solve the problem [2]. Leaks that are diagnosed on the pouchograms are usually clinically silent and innocuous and are managed by conservatively, with no further intervention required. These leaks usually are self-limiting and as long as the Foley catheter and suprapubic tube are draining well without any mucus blockage, they usually heal without long-term complications. In addition to the significant financial burden, the performance of pouchograms involves a trip to the radiology facility, and these procedures are not without significant morbidity. In a recent study, 3 of 72 patients developed sepsis requiring parenteral antibiotics and hospital admission [2].

We report a case of a Studer pouch, where a large and persistent urine leakage caused by a Foley catheter used as an abdominal drain migrated into the created pouch. This urinary leakage was identified using pouchography and treated conservatively with stent removal and with radiologic evidence of resolution within 2 weeks after removal of the drain. Although we diagnosed the leakage with pouchography, routine pouchograms have not been done at our institution after radical cystectomy and continent urinary diversions. In the absence of clinical suspicion of urinary leak, routine pouchograms may not be necessary and this will reduce costs and postpouchogram sepsis. We also believe that placement of a lodge drain is not necessary for urinary diversions since it might migrate into the pouch as seen in the presented case, which is our policy at our institution.

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