Case Report

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Spontaneous Perforation of a Modified Camey Neobladder

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Key Words

Neobladder
Perforation, spontaneous

Abstract

Radical cystectomy with neobladder connection to the urethra has been a treatment of choice for the motivated patient with localized invasive bladder cancer for the decade. Reports of spontaneous rupture of the neobladder were few. We herein report a case of spontaneous rupture of a neobladder without definite reason found out. Thus, the possibility of spontaneous rupture of the neobladder should always be kept in mind, once sudden onset of abdominal pain is noted by a patient who accepted radical cystectomy with a neobladder procedure.

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Introduction

Radical cystectomy with neobladder connection to the urethra has been a treatment of choice for the motivated patient with localized invasive bladder cancer. This procedure makes the patient void physiologically. Reports of spontaneous rupture of the neobladder have been few, and the documented causes of rupture were mucous plug obstruction [1] and tightly adherent band between neobladder and sigmoid colon [2]. We herein report a case of spontaneous rupture of the neobladder with no definite reason being found.

Case Report

A 69-year-old male with grade 2, stage pT2N0M0 transitional cell carcinoma of the urinary bladder underwent radical cystoprostatectomy and modified Carney procedure for creation of a neobladder. Foley was obstructed by a mucous plug 12 days postoperatively and released by irrigation. No more obstruction was noted and this patient could void voluntarily at daytime, and a diaper might be needed while sleeping because nocturnal incontinence was noted off and on. Convalescence was uneventful. However, sudden onset of lower abdominal pain was noted while sleeping one night 3 years after the operation. Intravenous pyelocystogram had been performed for routine follow-up about 15 h before and had revealed nothing abnormal. He was sent to the emergency room on account of difficulty in voiding and intolerable abdominal pain. Hypoactive bowel sound and tenderness over the epigastric and hypogastric area with significant muscle guarding were noted, although some urine was noted on the diaper and no obviously distended bladder was noted in the lower abdomen. Foley catheterization was performed to check the residual urine. About 250 cm³ urine was drained out, and no mucus-like fluid was noted. Abdominal sonogram revealed a small amount of fluid accumulating at Morison's pouch. The serial kidney, ureter, bladder and chest X-rays showed no significant finding, except

paralytic ileus. Cystourethroscopy was done due to persistent difficulty in voiding; there was only a little urine with some mucus. Otherwise no abnormal lesion was found inside the neobladder. However, the abdominal pain seemed to be worse and abdominal CT scan showed free air inside the peritoneal cavity. Emergent exploratory laparotomy was performed and a 0.4-cm perforated hole was found at the left limb of the neobladder. Only a small amount of urine-like fluid was noted in the peritoneal cavity and a thin layer of fibrin coating on the perforation hole. No significant adhesion band could be noted. Primary closure was done smoothly and the postoperative course was good. After his condition became stable, cystome-try showed detrusor hyperreflexia.

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Table 1. The established causes of neobladder rupture

Discussion

We report a case of spontaneous rupture of a neobladder without definite cause. By tracing back the patient's history, the sudden onset of lower abdominal pain may indicate the timing of rupture. Before the onset of pain, only intravenous pyelocystogram had been performed about 15 h before for regular checkup. However, there is no evidence and there are no published papers to demonstrate that hypertonic contrast medium may contribute to neobladder rupture. So far, the reported causes for spontaneous rupture of a neobladder were tight adherence to the sigmoid colon [1], overdistention, and obstruction of the outlet by a mucous plug (table 1).

In our case, no prominent adhesion was noted except a thin layer of fibrin around the perforated hole. Although only 250 cm³ of residual urine was noted on his arrival to our emergency room, the most likely reason of this spon-

taneous rupture of the neobladder was still mucous plug obstruction, because mucus-like fluid was noted while performing cystourethroscopy. To date, no single examination or test could diagnose neobladder rupture easily: no perforation was noted when we performed cystourethroscopy, and no defect could be found out via antegrade or retrograde cystogram by other series [1,3].

Duckett [4] once suggested that releasing the overdistended neobladder with an 18-gauge needle is warranted to prevent an overdistended neobladder from rupturing. However, prompt diagnosis and immediate exploratory laparotomy may be most essential for patients with spontaneous neobladder rupture. If a neobladder has been done, no matter how long ago the operation was performed, once this patient suffers from sudden onset of abdominal pain, high suspicion of spontaneous rupture of the neobladder should be kept in mind.

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Spontaneous Perforation of a Modified Carney Neobladder
Urol Int 1997;59:48-49

49