1110-5704
African Journal of Urology

Vol. 7, No. 1, 2001
43-44

CASE REPORT

SPONTANEOUS RUPTURE OF THE BLADDER ASSOCIATED WITH MASSIVE HAEMATURIA

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KEY WORDS: bladder rupture, haematuria

ABSTRACT

Spontaneous perforation of the bladder is extremely rare. We present an incidental diagnosis of spontaneous bladder perforation in a patient with massive haematuria and a long standing history of superficial bladder cancer associated with previous multiple resections and intravesical therapies. Conservative management in contrast to surgical intervention, which is usually the first step in the treatment of patients with spontaneous bladder perforation, was preferred because of the constraints due to the general status and age of the patient. The recovery was uneventful.

CASE REPORT

An 80-year-old male patient presented with haematuria and clot retention. He had a long-term history of superficial bladder cancer diagnosed by open resection at another institution in 1961. He had had multiple cystoscopies including several transurethral resections. He had received intravesical thiothepa and mitomycin for the management of his superficial bladder tumor. Since 1986, his follow-up and treatment has been performed in our department. During his follow-up, he had four recurrences in 1989, 1990, 1992 and 1994. Histopathological examination of the transurethral resections revealed transitional cell carcinoma Ta Grade 1, T1 Grade 2, Ta Grade 2 and T1 Grade 2, respectively on each occasion. He received intravesical epirubicin and BCG therapy after his tumor recurrences in 1990 and 1994, respectively. After that time, no recurrences have been observed during the follow-up.

When he was admitted to the hospital, he had had a history of gross haematuria for two days. Consequently, a urethral catheter was inserted and manual irrigation was done. His general status was quite good. Blood pressure was 100/65cmHg and his pulse rate was 105 per minute. His serum renal function tests were normal, but he had anaemia with a haemoglobin level of 6.7g/dl. Ultrasonography of the kidneys revealed normal findings. Since his gross haematuria was persistent, cystoscopic evaluation was performed. At cystoscopy, large (2 cm in diameter) areas of perforation at both lateral walls of the bladder were noted. Also multiple small (1-2mm) papillar lesions located at the right wall and base were seen and fulgurated.

A three-way urethral catheter was inserted and the patient was managed conservatively. Gross haematuria continued for two days. During the postoperative period a total of 11 units of blood were transfused. Cystography on the 15th post-operative day revealed extravasation. Upon repeat cystography, which was normal on the 24th day after the operation, his urethral catheter was removed and the patient voided without any problem. A control intravenous urography was normal. The consequent cystoscopy performed three months after this event revealed no tumoral mass and an intact bladder.

DISCUSSION

Spontaneous perforation of the bladder is extremely rare[1]. Several conditions have been reported in association with spontaneous perforation of the bladder. Invasive bladder cancer has been reported as an exceptionally rare cause of this situation[2]. Spontaneous rupture of the bladder has also been seen as a complication of radiotherapy[3]. Another case of spontaneous rupture of the bladder was noted in an alcoholic young patient[4]. Massive haematuria due to secondary amyloidosis of the bladder can also provoke spontaneous bladder perforation[5]. Almost in all cases reported in the literature, the clinical symptoms were not specific to the bladder rupture and usually suggested a case of acute abdomen. Cystography was the preferred diagnostic tool when a preoperative diagnosis of bladder perforation was suspected. Also computerized tomography was proposed to be useful in the diagnosis of bladder rupture even when the cystography was negative[6]. Usually immediate surgical intervention was the treatment of choice and associated mortality was reported to be at least 25% [7].

In our case, severe haematuria with clot retention was presumably the causative event. The patient's long-term history of superficial bladder cancer pertaining several resections including one open operation and multiple cycles of intravesical therapies probably altered the structure of the bladder wall. Consequently, the weakened bladder wall could not withstand the overdistension due to the clot retention. Contrary to the previously mentioned cases in which there were mostly symptoms of acute abdomen, the diagnosis in our case was incidental during a cystoscopy for a possible tumor. The reason for this atypical presentation may be the occurrence of perforations at the lateral walls and extraperitoneal extravasation. Conservative management taking into account the general status and age of the patient resulted in uneventful recovery.

In conclusion, in such patients with a long-term history of bladder cancer spontaneous rupture of the bladder should be considered in the case of massive haematuria. In such a case conservative management is an acceptable option when the general status of the patient is satisfactory.

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