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CASE REPORT

Medical Foreign Bodies in Urinary Bladder: a Case Report

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RETAINED foreign bodies in the urinary tract after surgical or diagnostic procedure, named iatrogenic foreign bodies, are rarely reported, though the estimated incidence was as high as 1/1500 cases.¹ Prompt and proper retrieval is required due to potential complications. We report a case of iatrogenic foreign body into the bladder.

CASE DESCRIPTION

A 60-year-old man had recurrent hematuria for 9 months and vesicular mass for 1 month. He received a suprapubic transvesical prostatectomy 9 months ago, but gross hematuria had appeared since then. Hematuria reduced to microscopic level but could not cease completely. Cystoscopy report in another hospital was normal. One month ago, ultrasonography in another hospital reported a hyperechoic mass, 1.8 cm×2.8 cm in size, located in the inner wall of urinary bladder, accompanied with immobile acoustic shadowing. There was no fever, pain, or micturition disorders.

On physical examination, the patient was generally well. Chest and abdominal examinations were unremarkable. Urine

examination showed pus cells 125 cells/μL, positive nitrate and trace red cells. CT (Fig. 1) of the pelvis showed a non-enhancing hyper dense mass, located on the anterior wall and at the right side of the bladder neck.

On cystoscopy, a reticular foreign body (Fig. 2), about 2 cm×2 cm in size and covered by calcium crystals was seen to the right side of the anterior vesicular wall, which was successfully removed after fragmentation. Pathologic examination demonstrated "sutures, mixed with some fibrovascular tissues and chronic inflammation".

His urine analysis returned to normal during follow-up. Repeat cystoscopy showed intact mucosa with mild scar formation in the place where the mass formerly located. On further questioning, the patient admitted having received blood transfusion of about 3000 mL during the previous prostatectomy.

DISCUSSION

Urinary tract can be site of various foreign bodies, such as copper wire,² lead pencil,³ hair pin,⁴ intrauterine device,^{1,5} surgical gauze,^{1,5} pieces of Foley catheter,^{1,2,5} and blades.⁴ Iatrogenic procedures were the leading source of foreign bodies, ranging from 43.8% to 80.0%. Other introduction routes include accidental or deliberate self-insertion, physical torture and migration from adjacent organs.¹ The most common clinical presentation is dysuria and hematuria; other



Figure 1. CT displayed the foreign body in the bladder (arrow).

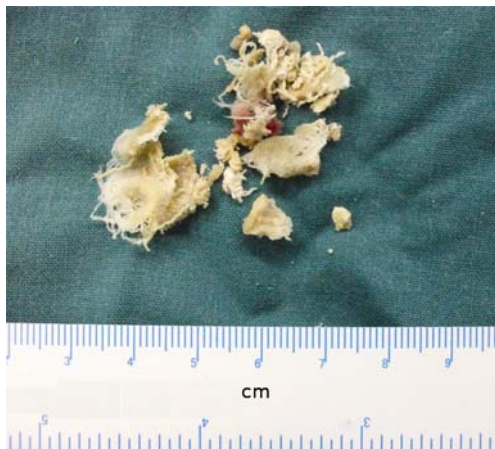


Figure 2. It displayed the foreign body in the gross.

complaints include urethritis, cystitis, recurrent urinary tract infection and acute urinary retention.^{1, 5, 6} In the present case, the patient presented with recurrent hematuria and the previous prostatectomy might be the source of gauze.

Plain kidney, ureter, and bladder X ray is helpful in diagnosing a radio-opaque foreign body at a sensitivity of 43.8%-70.0%.^{1, 5} Ultrasonography had a higher sensitivity (93.8%) but required experience of the radiologist.¹ Pelvic CT was also reported to be used in some situations. Cystoscopy is the device of choice both for diagnosis and for treatment. In this case, though ultrasonography had shown the mass, but it was not until repeat cystoscopy that the final

diagnosis was made.

Definitive management of intravesical foreign bodies is aimed at providing complete removal with minimal complications, either by intact retrieval or after fragmentation. With the aid of grasping forceps, stone punch, and retrieval basket, endoscopic retrieval is the ideal approach; but the optimal technique is dictated by the patient's condition, associated urinary tract, the size, shape, nature and location of the foreign body. In some circumstances, laparotomy and even open cystotomy are required. In our case, the foreign body was seen by both ultrasound and pelvic CT, and was removed piece by piece after careful evaluation under cystoscopy.

In conclusion, clinicians might be alarmed with the patient, but the past history is crucial in making a differential diagnosis. Any patient that is present with recurrent lower urinary tract symptoms and previous surgery of bladder or adjacent organs should raise the suspicion of intravesical foreign body.

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CORRECTION

In *Physiological Testosterone Retards Cardiomyocyte Aging in Tfm Mice via Androgen Receptor-independent Pathway* (Vol. 26, Issue 2, 88-94), Figure 1 on page 91 should have been as follows:

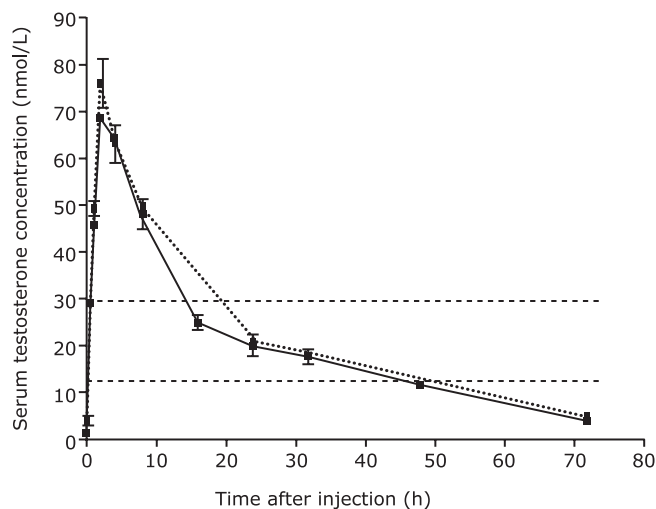


Figure 1. Pharmacokinetic curves of testosterone concentrations after single and double 72-hour cycles of testosterone propionate injection in testicular feminized (Tfm) mice. The testosterone levels in Tfm mice receiving a single 3 mg/kg intramuscular injection of 25 mg/mL testosterone were measured at 0, 0.5, 1, 2, 4, 8, 16, 24, 32, 48, and 72 hours after injection ($n=3$ at each time point, the solid line). An additional 3 mg/kg intramuscular injection of 25 mg/mL testosterone was administered 72 hours after the first injection, and the testosterone levels were measured at 1, 2, 4, 8, 24, and 72 hours after the second injection ($n=3$ at each time point, the dashed line). The area between the parallel dotted lines indicates the physiological range of testosterone concentration measured with male littermates (11.3-30.2 nmol/L, $n=9$).

The figure is correct at the website of *Chinese Medical Sciences Journal*.