

## Letter to the Editor

### Complication of penile sheath drainage in a spinal cord injury patient: calculus impacting in the urethra proximal to the rim of a condom

The common complications of penile sheath drainage in persons with spinal cord injury (SCI) are due to pressure effects of the condom on the penis. These include penile skin ulceration, localised chronic oedema on the dorsum of the penis mimicking keloid scar,<sup>1</sup> and urethral fistula on the ventral surface of the penis. Some SCI patients may develop allergic reactions to the condom.<sup>2</sup> Rare complications of penile sheath drainage are penile encrustation,<sup>3</sup> balanitis,<sup>4</sup> penile urethral diverticulum,<sup>5</sup> intradiverticular lithiasis,<sup>6</sup> bilateral hydronephrosis,<sup>7</sup> and distal penile necrosis.<sup>8</sup>

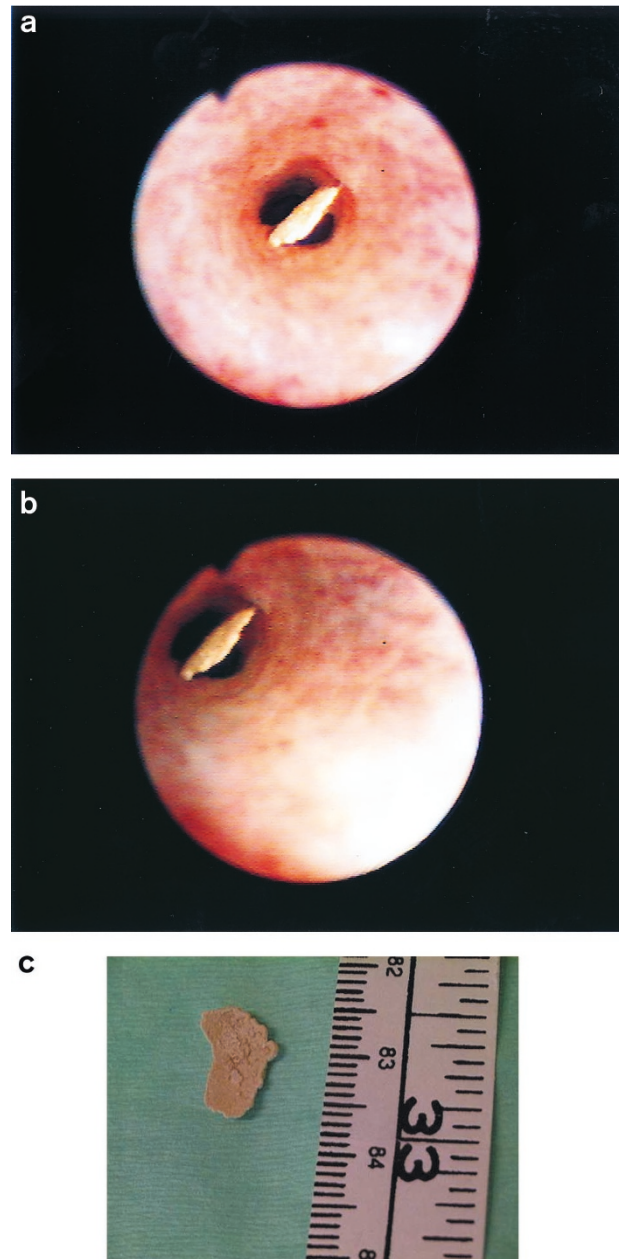
We report a tetraplegic patient in whom a migratory stone from the urinary bladder got impacted in the urethra just proximal to the rim of a penile sheath. Although it is known that a calculus may get lodged in the urethra proximal to a stricture, a migratory calculus getting impacted in the penile urethra proximal to the rim of a condom has not been described.

A 33-year-old male sustained fracture of C-6 and developed tetraplegia C-5 (ASIA scale B) in 2000. He had an indwelling urethral catheter for 7 weeks. Subsequently, the catheter was discarded and he wore a penile sheath. After about 2 months, he noticed a small painful lump in the mid-shaft of penis, at the level of the proximal rim of the penile sheath. He had no difficulty in passing urine. With a diagnosis of urethritis, he was prescribed a course of trimethoprim. As the swelling persisted, flexible cystoscopy was performed. Cystoscopy revealed a flat stone wedged in the urethra like a septum about 4 cm proximal to the external meatus (Figure 1A). There was no narrowing of urethral lumen. (Figure 1B). There was oedema of the urethral mucosa around the edges of the stone. Under inhalational anaesthesia, a 22 Fr. cystoscope was passed into the urethra. A biopsy forceps was used to grasp the stone. With gentle manoeuvres, the stone was freed from the oedematous mucosa. The instrument was then withdrawn from the urethra while still holding the stone. Thus the stone was removed *in toto* without causing any damage to the urethra (Figure 1C). Cystoscopy was then performed. There was no urethral stricture. There were two stones in the bladder. Electrohydraulic lithotripsy of bladder calculi was performed. An urethral catheter drainage was provided for 48 h. There was no bleeding per urethra. After removal of the catheter, the patient has been able to resume reflex voiding in a satisfactory manner.

This patient developed bladder stones during the acute phase of spinal cord injury. The indwelling urethral catheter was a major contributory factor to the formation of bladder stones in this patient. When he recovered reflex micturition, one of the vesical calculi was forced out of the bladder during an act of voiding. The stone managed to pass through the bladder neck and the prostatic urethra. However, the migrating calculus got stuck in the penile urethra, where the proximal rim of the penile sheath acted as a constricting device upon the urethra. It was a flat stone and therefore, got impacted in the urethra almost like a septum (Figure

1A). This explains why this patient did not develop obstructive urinary symptoms.

This case illustrates the fact that the proximal rim of a penile sheath may act as a constricting device upon the



**Figure 1** (A) Flexible cystoscopy revealed a flat stone impacted in the penile urethra, almost mimicking a urethral septum. (B) Photograph of the urethra taken during flexible cystoscopy: There is no narrowing of the urethral lumen. (C) Photograph of the stone removed from the urethra

urethra. It has been a customary practice to snip the proximal rim of the sheath after it is applied securely over the penis. Snipping the rim of the penile sheath would help to minimise the pressure effect upon the urethra. Although a proximal rim is less conspicuous in the newer penile sheaths, the rim becomes prominent if a sheath is not unrolled completely.

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