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·*Case report*·

Isolated posterior urethral injury: an unusual complication and presentation following male coital trauma

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Abstract

We describe an unusual complication of coital trauma in a 29-year-old man who presented with a 3-year history of hematospermia and post-coital gross hematuria. Using urethroscopy under a semi-tumescent penis, an isolated urethral injury with active bleeding was detected at the prostatic urethra. The patient was successfully treated with transurethral fulguration. We suggest that isolated posterior urethral injury is one of the causes of male coital trauma, which might be asymptomatic when the penis is flaccid but show symptomatic bleeding when the penis is erect. *(Asian J Androl 2006 May; 8: 379–381)*

Keywords: coitus; trauma; hematuria; hematospermia

1 Introduction

Male coital trauma is apparently rare in the general population; however, it is not uncommon after sexual intercourse that is vigorous or performed in an unusual position. Patients might seek immediate help because of pain, bleeding or swelling that result from coital-related injuries, such as penile abrasions and lacerations as well as more serious injuries, such as penile fracture [1]. We describe an unusual complication of coital trauma in a young man who presented with a 3-year history of painless hematospermia and post-coital gross hematuria. The symptoms first occurred after one episode of vigorous reverse coitus. After a series of investigations, the patient was diagnosed as having an isolated prostatic urethral injury. We present the diagnostic modalities, the possible mechanism of the injury, and the treatment used.

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2 Case presentation and management

A healthy 29-year-old man with a 3-year history of painless hematospermia and post-coital painless gross hematuria visited our andrology clinic. A detailed history revealed that his symptoms first occurred after one episode of vigorous reverse coitus. At that time, blood-tinged ejaculate was observed but there was no snapping sound, rapid detumescence, penile swelling or urethral bleeding. Since then, hematospermia was followed by painless gross hematuria for each sexual intercourse or masturbation. The gross hematuria would persist for 1–2 d. Occasionally, acute urinary retention as a result of massive blood clot obstruction would occur. Therefore, he was depressed and afraid of sexual activity. Urinary analysis, introvenous urography, transrectal ultrasonography and cystourethroscopy (Figure 1A) examinations were normal. A cavernosography, under artificial erec-

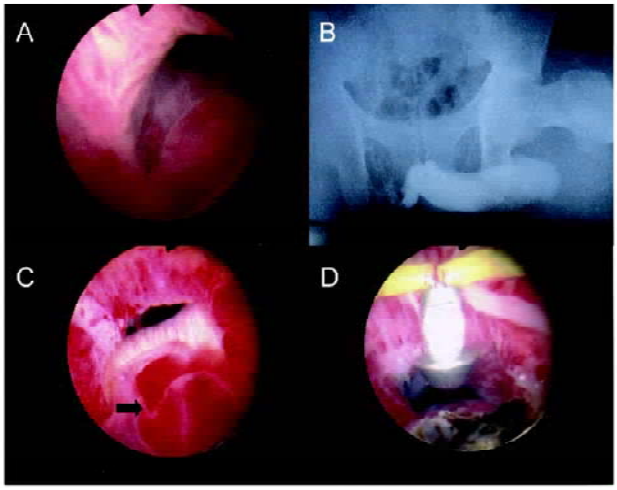

Figure 1. (A): Urethroscopy of the patient's flaccid penis shows normal urothelium at prostatic urethra. (B): Cavernosography shows normal configuration of corpus cavernosum without leakage of contrast medium. (C): After an artificial erection, the urethroscopy shows an active bleeding lesion at the prostatic urethra distal to the verumontanum (arrow). (D): The bleeding lesion was treated using transurethral fulguration.

tion and spinal anesthesia, showed a normal corporeal configuration, and no contrast medium was detected in the urinary tract (Figure 1B). Repeated urethroscopy of the patient's semi-tumescent penis showed an active bleeder at the 6-o'clock position of the prostatic urethra distal to the verumontanum (Figure 1C), which led to a diagnosis of isolated urethral injury. Transurethral fulguration (Figure 1D) was performed smoothly and the patient was indwelled with 14 Fr Foley catheter for 3 d. Abstinence was suggested, and conjugated equine estrogen (Premarin) was prescribed (0.625 mg; t.i.d.) for 1 month to prevent nocturnal erection. The patient was sexually active and without urinary complaints after 1 month. Neither hematospermia nor post-coital gross hematuria was detected at the 6-month follow-up.

3 Discussion

Male coital injuries include contusions, lacerations, bladder ruptures, urethral ruptures, penile fractures, corporo-urethral fistulae, penile vascular injuries, thrombosis/lymphangitis of the penis and rupture of the penile suspensory ligaments [1–7]. Penile fracture with or without urethral injury is the most common coital-related injury and typically occurs with a snapping sound associated with severe pain and rapid detumescence [3, 8]. Isolated urethral injury is extremely rare and differs from what occurs with penile fracture by the absence of a snapping sound, sharp pain and detumescence [4]. In the present case, the lack of a snapping sound, rapid detumescence penile deformity and subcutaneous hematoma clinically excluded fracture of the penis. Additionally, the normal findings of introvenous urography, cystourethroscopy when the patient's penis was flaccid, transrectal ultrasonography and cavernosography indicated that the patient did not have a bladder rupture, inflammation, neoplasm or corporo-urethral fistula. Before an artificial erection was induced, cystourethroscopy showed intact urethral epithelium without any engorged vessels or prostatic telangiectasia, suggesting that the bleeding did not come from pre-existing vascular lesions. Urethroscopy of the patient's semi-tumescent penis revealed a small, actively bleeding lesion at the 6-o'clock position in the prostatic urethra. Therefore, we believed that the locus of the hemorrhage was a small traumatic urethral rupture, presumably associated with the patient's vigorous reverse coitus. Because the lesion was small, it was usually asymptomatic when the patient's penis was flaccid, but it evinced symptomatic bleeding when his penis was erect, presumably as a result of the increase of corpus spongiosum pressure. However, it has been reported that traumatic arteriovenous fistulae might develop after prostatic biopsy [9]; therefore, it is reasonable to speculate that arteriovenous fistulae of the prostatic urethra might occur in our patient's condition. Although we are unable to confirm this possibility in the present case, arteriogram and/or color duplex Doppler ultrasonography might help in diagnosis of male coital injury in the future.

Male coital injuries are often caused by unusual sexual practices or postures. During vigorous reverse coitus, the erect penis is vulnerable to collision with the inferior margin of the pubic arch and pubic symphysis of the female partner. Because the urethra is on the ventral side of the penis, it is sandwiched between the hard erect corpora of the man and the pubic arch of the woman, and is prone to injury [4]. In one report of three cases of isolated urethral injury during reverse coitus, all the patients complained of severe pain, urethral bleeding and immediate detumescence [4]. All lesions occurred at the fossa navicularis, and application of manual pressure stopped the bleeding. Our patient, however, had no severe pain, sudden detumescence or urethral bleeding, and the lesion was at the prostatic urethra. Therefore, we deduced that both the distal and the proximal urethra are

susceptible to injury from vigorous sexual intercourse, and that clinical presentations of coital-related urethral injury might vary more than currently reported. Given that the lesion was small and located at the prostatic urethra, it could not be easily identified when the penis was flaccid nor be treated using manual compression.

Although rare, isolated urethral injury is one of the causes of male coital trauma. It might occur without the typical features of penile fracture, and might present with post-coital painless gross hematuria and hematospermia. The posterior urethra, as well as the fossa navicularis, is a possible vulnerable site. We recommend a urethroscopy when the penis is tumescent as a useful diagnostic modality for male coital trauma. Transurethral fulguration, short-term oral estrogen and abstinence are adequate treatment for this unique coital-related injury.

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