

Retrograde Urethrography Examination in Penile Fracture: Case Report

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Abstract

Case Report

Penile fracture is an uncommon condition. Fracture of the penis is a tear in the tunica albuginea of the corpora cavernosa that may be associated with injury to the corpus spongiosum and urethra. We describe the case of a 51-year-old man who presented with acute penile pain, penile swelling, and a hematuria after a blunt trauma during sexual intercourse. Retrograde urethrography examination revealed extravasation from distal penile urethra into the cavernous structure. In cases of penile fracture, retrograde urethrography can be used for definitive diagnosis.

Keywords: Penile fracture, urethral injury, imaging, retrograde urethrography.

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INTRODUCTION

Fracture of the penis is a tear in the tunica albuginea of the corpora cavernosa which may be associated with injury to the corpus spongiosum and urethra [1]. Diagnosis is usually clinical, and urethral injury should be suspected in the penile fracture, especially in those cases with bilateral cavernosal rupture [2].

If there are blood in the meatus, hematuria, and difficulty in voiding, an associated urethral injury should be considered. Immediate retrograde urethrography should be considered if the symptoms of urethral injury are present [3].

The aim of this paper is to present a case of penile fracture with associated urethral injury, diagnosed by retrograde urethrography.

CASE REPORT

A male patient, aged 51, was came to emergency unit complaining of sudden loss of erection during sexual intercourse, penile swelling, hematuria, discoloration, disfigurement, and blood in the urethral meatus urethrorrhagia. These symptoms had emerged 6 hours earlier, and the patient was still able to void in small amounts, with blood present in his urine. During the physical examination, a hematoma in the ventral penile shaft, pain during palpation and urethrorrhagia were present (Figure-1). Patient's history and a physical examination indicated a penile fracture. The patient's retrograde urethrography revealed extravasation from

distal penile urethra into the cavernous structure (Figure-2).



Fig-1: Hematoma in the ventral penile shaft



Fig-2: Urethral distal injury and rupture of corpus cavernosum in retrograde urethrography

DISCUSSION

Penile fracture is a rare urological emergency. The tunica albuginea is a structure of great tensile strength that is able to withstand rupture at pressures up to 1500 mmHg. The tunica albuginea thins markedly during erection, which when combined with abnormal bending leads to excessive intracavernosal pressure and most often a transverse laceration of the proximal shaft [4, 5].

Penile fracture is diagnosed based on the patient's history, clinical examination, and the classic triad: audible "cracking" sound, followed by immediate detumescence and pain [3].

Penile fracture is mostly caused by the bending of the erect penis either over the pubic bone or the perineum of a sexual partner, during brutal masturbation, or penile kneading and snapping to achieve sudden detumescence. A transverse 1 to 2 cm tunical tear, usually unilateral, is present despite reports of tears in both corporal bodies [6, 7].

Penile fracture diagnosis is mostly made clinically without the need for additional diagnostic tools as the fracture site is obvious. Cavernosography is to be considered in complicated cases due to the inherent contrast reaction fibrosis from extravasated contrast medium, infection, and priapism risk or only in deep dorsal vein rupture of the penis, which might be indistinguishable from cavernosal rupture [8].

Urethral bleeding and voiding incapacity can be symptoms of urethral injury. A retrograde urethrography should promptly be requested for

effective treatment planning and, if the injury is present, simultaneous urethral repair during surgery [9].

In the penile fracture associated with urethral injuries, retrograde urethrography is an option. With better outcomes and fewer long-term complications, early surgery is preferable to conservative management.

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