RUPTURE OF THE SUPERFICIAL VEIN OF PENIS: THERAPEUTIC OPTIONS

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Summary.- OBJECTIVE: To report an uncommon clinical case of spontaneous rupture of the superficial dorsal vein of penis.

METHOD: A 27-year-old male patient attended the emergency room following spontaneous occurrence of a large hematoma and deformity in the penis. Rupture of cavernous bodies was initially suspected.

RESULTS: Surgical examination revealed rupture of the superficial dorsal vein of penis, which was ligated. The patient was admitted to hospital for 24 hours, and showed total cosmetic and functional recovery at 2 weeks.

CONCLUSIONS: Rupture of the superficial dorsal vein of penis is an uncommon condition considered in differential diagnosis of penile hematoma. Doppler ultrasound of the penis may allow for its diagnosis and for excluding rupture of corpora cavernosa. Although conservative management appears to be of choice, surgical examination, providing good cosmetic and functional postoperative results, is indicated when a reasonable doubt exists about diagnosis.

Keywords: Spontaneous rupture. Penile physical injuries. Diagnosis. Treatment.

INTRODUCTION

Traumatic lesions of the penis are varied. The most common condition is fracture of cavernous bodies. There are however less common vascular conditions which are important in differential diagnosis because they may have a similar clinical presentation.

CASE REPORT

A 27-year-old male patient with surgery for phimosis as the only remarkable history noticed on waking a penile hematoma and a slight penile deformity. The hematoma progressed in the subsequent hours, and patient...
therefore attended the emergency room. The patient reported no prior sexual activity, and had heard no snap. There were no voiding symptoms either.

Physical examination revealed edema and a hematoma extending from the base of the penis to the middle of the glans. The penis was clearly deformed, with angulation to the left of the distal half. Examination was painful. This clinical presentation suggests rupture of cavernous bodies, and the patient was therefore urgently taken to the operating room (Figure 1).

A subcoronal incision was made on the circumcision scar, reaching Buck fascia and continuing dissection towards the base. A rupture of the superficial dorsal vein was found at the middle third of the penis and ligated (Figure 2). Surgical examination was continued, checking integrity of cavernous bodies.

The patient was discharged on the following day with anti-inflammatory treatment and recommended sexual abstinence. At 2 weeks, total cosmetic and functional recovery was found.

**DISCUSSION**

Penile vascular lesions are uncommon and mainly occur during intercourse either from hyperflexion or direct trauma. They may occur less commonly when turning or falling on the bed with the penis erected or during masturbation (1). When the penis is erect, the thickness of the tunica albuginea decreases from 2 mm to 0.5-0.25 mm, which makes it much more vulnerable to aggression (2).

An adequate clinical history and physical examination is very important for diagnosing this type of lesion. Fracture of cavernous bodies, rupture of the deep dorsal vein of penis, and in some cases Mondor disease should be considered in differential diagnosis. The characteristic signs of a fracture of cavernous bodies include an initial snap with immediate pain and penile detumescence, associated to bruising and deformity towards the uninvolved side. Palpation is painful, and may sometimes reveal the fracture site. In cases with urethral involvement, patients may experience urethrorrhagy and difficult urination (3,4,5). Rupture of the deep dorsal vein is virtually indistinguishable from that of cavernous bodies, except for the absence of an initial snap and sometimes of pain. Unlike these, rupture of the superficial dorsal vein causes gradual detumescence and progressive hematoma, usually crescent-shaped. No snap is heard, and pain and penile deformity do not usually occur (3,6). Mondor disease of penis consists of phlebitis of the superficial dorsal vein, usually caused by repeat trauma and evidenced as a painful cord in the dorsal aspect of penis, painful erection, and bruising (7).

When in doubt about diagnosis, a penile Doppler ultrasound should be performed. This examination provides information about the integrity of tunica albuginea and allows for ruling out the presence of venous thrombosis (1,6). Other supplemental tests such as magnetic resonance imaging, seldom available in the emergency setting, or cavernosography, no longer performed because of its invasiveness, may also diagnose rupture of cavernous bodies (2,5,6).

Although few reports of this condition are available, the most common treatment of choice is conservative management consisting of administration of anti-inflammatory drugs, local ice, heparinoid creams, compressive bandage, and antibiotics in some cases, associated to sexual abstinence for 2 to 6 weeks. The course of the condition using this approach has been seen to be good, with complete recovery (1,2,6). However, if
diagnosis of cavernous body rupture may reasonably be suspected, urgent surgical examination is indicated (1,3,7).

In our case, despite its atypical presentation, the large hematoma and penile deformity led us to doubt about the integrity of cavernous bodies. Surgical review allowed for ruling out rupture of cavernous bodies, draining the hematoma, and resolving bleeding from the superficial dorsal vein. Despite the invasive approach chosen, total cosmetic and functional recovery was achieved in only 2 weeks. According to the literature reviewed on the subject, surgery may be considered in these patients as a treatment option because it causes minimal morbidity, barely requires hospital admission, and recovery is very quick (5,8).

CONCLUSIONS

Rupture of the superficial dorsal vein of penis is an uncommon condition considered in differential diagnosis of penile hematoma. Doppler ultrasound of the penis may allow for its diagnosis and for excluding rupture of cavernous bodies. Although conservative management appears to be of choice, surgical examination, providing good cosmetic and functional postoperative results, is indicated when a reasonable doubt exists about diagnosis.

REFERENCES AND RECOMMENDED READINGS

(*of special interest, **of outstanding interest)


