Breakage of cavernous bodies and urethra during sexual intercourse

Rotura de cuerpos cavernosos y de uretra durante la actividad sexual

Dear Editor,

Penile fracture is uncommon; there is associated urethral injury in 10–38%[1,2] of cases. This urological emergency is caused by trauma of the erect penis against the pubis or perineum of the partner during intercourse, as the mobility of the penis and the thickness of the tunica albuginea are reduced compared to the flaccid state[3,5]. Surgery is currently the most accepted treatment. We present the case of a 30-year-old male who came to the Emergency Service for acute pain in his penis and massive urethrorrhagia during sexual intercourse. He had consumed cocaine before intercourse. The physical examination revealed a hematoma on the ventral aspect of the distal third of the penis. Bleeding was controlled with compression bandaging.

The MRI reported a 2.5-cm hematoma between the corpora cavernosa creating a mass between these structures and the urethra (fig. 1), and discrete signal heterogeneity spots in the corpora cavernosa which could correspond to ruptured areas.

The patient underwent surgery; a coronal circumferential incision was made to release the corpora cavernosa and the posterior border of the urethra; vicryl 4/0 was used for interrupted sutures of the wounds. Compression bandaging was applied, and a 14 Ch Foley catheter was inserted. Antibiotic coverage consisted of ceftriaxone 1 g over 24 hours; NSAIDs were administered.

Progress was favorable; three months later the patient had a normal erectile function, and a normal flowmetry ruled out residual urethral stenosis.

The second case is a 29-year-old male who presented with acute penile pain and urethrorrhagia during sexual intercourse. He had consumed marihuana before intercourse. The physical examination showed penoscrotal hematoma, urethrorrhagia, and a rupture of the right corpus cavernosum.

An MRI diagnosed rupture in the proximal third of the right corpus cavernosum and a 4.5-cm hematoma (fig. 2) that tore the albuginea of the corpus cavernosum and caused bulging of the ventral aspect of the penis, displacing the corpus spongiosum contralaterally.

The patient underwent emergency surgery with the same procedure as in the preceding case. His progress was also good; he had rigid, painless erections with no penile curvature, and no residual urethral stenosis.

The typical presentation of a fracture of the penis is a cracking sound after trauma of the erect penis, rapid loss of erection[6], with or without pain[7], curvature of the penis to the opposite direction of the fracture, and development of a genital (exclusively penile) hematoma in most cases. If Buck's fascia is injured, the hematoma may extend to the scrotal, perineal, or hypogastric regions, and is limited by Colles' fascia. Urethrorrhagia, blood in the urethral meatus, and urinary retention are suggestive of associated urethral injury.

The diagnosis of rupture of the corpora cavernosa is clinical, through a clinical history and a physical examination. Imaging techniques such as retrograde urethrocystography, cavernosography, ultrasound, and MRI can also be used. Retrograde urethrography is indicated when there are signs or symptoms of urethral injury such as urethrorrhagia or impossible catheterization. Cavernosography is performed by injecting iodinated contrast material into the corpora cavernosa; the extravasation of dye at the fracture location is diagnostic. This technique is being abandoned not only

Figure 1 – A 2.5-cm hematoma acting as a mass between the corpora cavernosa and the urethra, and a ruptured corpus cavernosum.

Figure 2 – Rupture of the corpus cavernosum.

because of the false negatives in cases of small fissures or the rapid clogging of the wound in the albuginea by a clot, but also because of the risk of iodinated contrast agent reactions, infection, and increased fibrosis caused by the extravasation of the contrast material[3,4,9]. Ultrasound is a noninvasive technique that permits the visualization of the hematoma and sometimes the fracture of the corpus cavernosum, which is observed as a hypoechoic area disrupting the continuity of the tunica albuginea[3-5,8]. Its disadvantages are the difficulty in detecting small ruptures, and the necessity of trained ultrasonographers who can adequately interpret the test. MRI is currently the most reliable diagnostic method[9] because it provides excellent visualization of the pendular portion of the penis, especially the albuginea.

Differential diagnosis must be made especially with rupture of the deep dorsal vein of the penis, which is caused by the same traumatic mechanism and has similar clinical manifestations[3,5,8].

Until the 1970s, the first-choice treatment was conservative, with urethral catheterization or cystostomy if the former was not possible, compression bandaging, local ice, antibiotics, analgesics, and sedatives to prevent erection[3,4]. Sequels included fibrous plaques in the area of the rupture, penile curvature, painful erection, and urethral stenosis[4]. Currently, conservative treatment is only offered when diagnostic tests confirm that the tunica albuginea is not affected. Otherwise, immediate surgical exploration[7] is mandatory to prevent the formation of fibrous tissue in the hematoma. When the fracture is localized and the hematoma is small, a longitudinal incision is done over the hematoma[3,4]; if the hematoma is large or there is associated urethral injury, it is better to do a circumferential coronal incision[10] which permits an easy evacuation of the hematoma, and the repair of the albuginea and the urethral lesion.

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