Post-traumatic hematoma of the epididymis: Case-report

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KEYWORDS

Scrotal trauma;
Epididymis;
Ultrasonography (US).

Abstract Scrotal trauma accounts for less than 1% of all trauma-related injuries. Traumatic injuries of the epididymis are extremely rare.

Here we report a rare case of hematoma of the epididymis, diagnosed with US, in a 10-year-old boy after a sport injury.

Sommario I traumi scrotali rappresentano meno dell'1% di tutte le lesioni trauma-correlate e tra queste sono estremamente rare le lesioni traumatiche dell'epididimo.

Presentiamo un raro caso di ematoma dell'epididimo, diagnosticato ecograficamente, in un ragazzo di 10 anni in seguito ad un trauma sportivo.

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Introduction

The epididymis, made up of a head, body, and tail, is located superior to and is contiguous with the posterior aspect of the testis. The head of the epididymis (globus major) lies cephalad to the testis and is composed of 8–12 efferent ducts converging into a single larger duct in the body and tail (globus minor). This single duct becomes the vas deferens and continues in the spermatic cord [1].

The head of the epididymis is approximately 10–12 mm in antero-posterior dimension. The body has an average thickness of 1–2 mm (normal thickness, <4 mm) and is best depicted with coronal scanning of the scrotum [2].

The deferential artery, a branch of the superior vesicle artery, and the cremasteric artery, a branch of the inferior epigastric artery, supply the epididymis, vas deferens, and peritesticular tissue [1].

In echographic exam the epididymis appears moderately isoechoic or hyperechoic when compared with the testis [2].

Color-Doppler constantly shows intratesticular flow [3], while the epididymis physiologically shows almost no vascularity [4].

Case report

Here we report the case of a 10-year-old boy that came to our attention with acute scrotal pain, two days after a sport injury.

The clinical examination showed a moderate tumefaction of the scrotum and a painful reaction upon palpation at the head of right epididymis.

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US showed a minimum endoscrotal effusion and the presence, at the head of right epididymis, of a lesion with a dishomogeneous echostructure, mainly hyperechogenic, with a diameter of about 3 mm, and with the typical aspect of a hematoma (Fig. 1); at color-Doppler (Fig. 2) it showed no vascularity. No alterations of the head of left epididymis, of the testis and of the sheaths were seen.

Follow-up US, performed one month after the trauma, showed the complete disappearance of the lesion (Fig. 3).

Informed consent was obtained from the patient for the publication of this case report.

Discussion and conclusions

Scrotal trauma accounts for less than 1% of all trauma-related injuries, because of the anatomic location and mobility of the scrotum. The peak occurrence of scrotal trauma is in the age range of 10–30 years [2].

They can be distinguished in blunt injuries, penetrating injuries, and iatrogenic injuries [5].

Blunt trauma is the most commonly occurring form and usually results from athletic injury (about 50% of blunt trauma cases), motor vehicle collision (9–17% of cases), or assault [2].

Trauma can result in contusion, hematoma, fracture, or rupture of the testis and hematoma or rupture of the sheaths, while epididymal injuries are extremely rare [1].

Patients with scrotal trauma are usually a medical emergency, and rapid and accurate diagnosis is necessary

Figure 2 Hematoma of the epididymis: color-Doppler exam shows the absence of vascularity at the head of epididymis.

to guide treatment and prevent complications such as loss of the testis [2].

Ultrasonography (US) is the ideal methodic for the assessment of scrotal trauma, as it can be used for noninvasive evaluation of the scrotal contents, testicular integrity, and blood flow, as well as to visualize hematomas, other fluid collections, and foreign bodies [2].

Epididymis injuries after scrotal trauma are rare and not well documented in literature. Most of the time epididymis injuries were suggested by US and are often seen in association with testicular injuries [6]; generally pose little risk to the patient, do not require surgical therapy and are managed conservatively [1].

The US appearance of hematoma, regardless of the involved structure, testis, epididymis, or scrotal wall, varies with time. Acute hematoma appears hyperechoic, subsequently becomes complex due to coagulation and formation of cystic components (Fig. 1). Hematoma appears avascular on color-Doppler US scans [1] (Fig. 2).

We have reported a case of hematoma of the head of epididymis for its typical presentation (subsequent to sport injury and US appearance of a lesion with a dishomogeneous echostructure, avascular at color-Doppler), for its rare occurrence and because it confirms the sensibility and specificity of US in the evaluation of scrotal lesions.

Figure 1 Hematoma of the epididymis: US shows a rounded lesion, with a dishomogeneous echostructure, mainly hyperechogenic, at the head of right epididymis (A, B).

Figure 3 The same case of the previous figures, follow-up exam after one month: US shows the complete disappearance of the lesion.

Conflict of interest statement

The authors have no conflict of interest to declare.

Appendix Supplementary data

Supplementary data related to this article can be found online at [doi:10.1016/j.jus.2011.09.001](https://doi.org/10.1016/j.jus.2011.09.001).

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