

# Consequence of neglecting an epididymal hematoma

## Summary

Thanks to the mobility of the testes in the scrotum, the cremasteric reflex and the tunica albuginea,<sup>1,2</sup> the scrotal trauma accounts only for less than 1% of all trauma-related injuries and 10% of cases of abdominal trauma.<sup>3,4</sup> But despite its low incidence, this type of trauma, if poorly treated, can lead to significant after-effects, especially the epididymis, which is even less affected than the testicle. In the context of forceful trauma, isolated epididymal injury without accompanying scrotal or testicular injury is quite uncommon. Here we report a case of a neglected epididymal hematoma following a motorcycle accident which end up with a necrotic testicle.

**Keywords:** Epididymal hematoma, conservative approach, orchidectomy, ultrasound

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## Case presentation

A 21-year-old male patient, presented to the emergency department with scrotal pain, swelling, and bruising to his right hemiscrotum. He reports having a violent motorcycle accident 4 hours ago. Physical examination, even if somewhat hampered by swelling, found a palpable, moderate-sized hematoma on the spermatic cord path, with a painful right testicle. The patient underwent a scrotal doppler ultrasound examination which demonstrated a right epididymis increased in size measured 52x20 mm, hyperechogenic suggesting an epididymis hematoma. The testes were symmetrical and homogenous with no evidence of testicular injury. The patient was reluctant and refused all sort of medical or surgical care. He comes back 4 days later with scrotal pain resistant to analgesic treatment (Figure 1). Another doppler ultrasound examination was requested. The right testicle was normal sized with hypoechoic structure, but was avascular with a thin-walled hydrocele (Figure 2). A surgery has been indicated which found an epididymis expansive hematoma with necrotic testicle (Figure 3). An orchidectomy has been done.

## Discussion

Less than 1% of trauma-related injuries are blunt scrotal trauma, which is most frequently brought on by athletic injury (50%), motor vehicle collision (9%–17%), or assault.<sup>5,6</sup> Testis rupture, avulsion, torsion, and hematoma are examples of possible injuries. Nonetheless, it is extremely uncommon for an epididymal injury to occur alone without a scrotal or testicular injury present.<sup>7</sup>

Unfortunately, for a variety of reasons (e.g., an unwilling patient due to pain, considerable soft tissue edema), clinical examination of the scrotum in the acute post-trauma situation can be challenging and unreliable. Erroneous patient triaging for surgical exploration may arise from a failure to obtain a trustworthy physical examination.<sup>8</sup>

Testicular rupture can be accurately diagnosed with scrotal ultrasonography, which also enables a dependable assessment of scrotal injuries. For genital trauma, high-frequency ultrasonography combined with the Doppler flow method is still the preferred imaging modality. When scrotal trauma occurs, ultrasound is used to evaluate the integrity of the injured tissue. It is a cheap and widely accessible modality of imaging.<sup>9</sup>



Figure 1 Right hemiscrotum appearance.

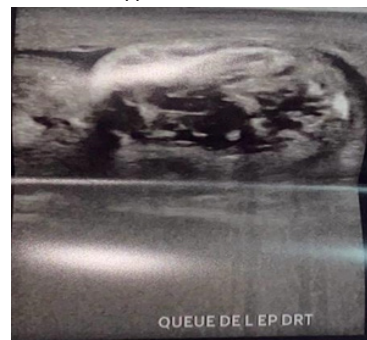


Figure 2 Second doppler ultrasound showing an avascular right testis.



Figure 3 Aspect of the epididymis and the testicle during the exploration.

When it comes to the follow-up care of patients with scrotal injuries, ultrasonography is also helpful. This is particularly true for certain injuries, like hematoma formation, where small hematomas that don't show signs of testicular rupture can be treated conservatively but still carry a high risk of infection and necrosis that doesn't go away (up to 40% of cases), necessitating close monitoring and re-imaging.<sup>10</sup>

Following blunt trauma, hematomas and/or hematoceles are the most often observed findings in the scrotum. Acute hematomas may show up isoechoic with the surrounding testis on scrotal ultrasonography. It is beneficial to reexamine after 12 to 24 hours to check for changes in echogenicity because evolving hematomas have the potential to transition from hypoechoic to anechoic. When deciding if surgical exploration is necessary, it is crucial to evaluate the blood flow of the surrounding veins to the testes in order to check for compressive stresses.<sup>11</sup>

The evacuation of the hematoma during operational care and good hemostasis to reduce the risk of rebleeding after surgery are important aspects of general management. For hematomas that are less than 5 cm in size and not growing, or for hematoceles that are less than three times the size of the contralateral testis, the available data suggests conservative therapy. This could entail using ice and scrotal support as treatment.<sup>12-14</sup>

Because large hematoceles can result in high rates of delayed exploration (up to 40%) and orchiectomy (15%), as well as infection, pain, atrophy, pressure necrosis, and prolonged hospital stays in conservatively managed cases, patients with these conditions benefit from early operative management with hematoma evacuation, even in the non-ruptured testis.<sup>12-14</sup>

In the setting of blunt scrotal trauma, isolated epididymal injuries are rare and typically coexist with other testicular injuries.<sup>15</sup> Testicular rupture must be excluded before choosing a conservative approach.<sup>16</sup> According to Gordon et al., hyperemia of an expanded epididymis on Doppler ultrasound implies traumatic epididymitis.<sup>17</sup> Hydrocele, hematoma, and underlying epididymal damage can also be linked to an enlarged, hypoechoic epididymis.<sup>18</sup>

This case highlights the risk of neglecting a post-traumatic hematoma and the repercussions it can have. Although the majority of cases are treated conservatively, surgical exploration and drainage of the hematoma is still indicated, especially in the case of a hematoma larger than 5cm or one-third the size of the contralateral testicle, or in the case of an expansive hematoma, to avoid severe complications that could jeopardize the viability of the testicle.<sup>19</sup>

## Conclusion

We present a patient suffering from scrotal trauma with epididymal hematoma found on ultrasound, which refused surgical exploration and was later complicated by testicular necrosis. We emphasize the importance of surgical exploration in the presence of an epididymal hematoma based on the criteria of size and expansion, as well as that of Doppler monitoring 24 hours later if a conservative attitude has been chosen.

## Ethical approval

Ethics approval has been obtained to proceed with the current study. Ethical approval for this study (Ethical Committee N°09-24) was provided by the Ethical Committee Ibn University Hospitals, Rabat Morocco on 19 January 2024.

## Consent

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

## Scare guidelines

The work has been reported in line with the SCARE criteria.<sup>20</sup>

## Acknowledgments

None.

## Conflicts of interest

The authors declare that they have no competing interests.

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