

Taser-Related Testicular Trauma



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The Thomas A. Swift's Electric Rifle (Taser) is an electrical weapon designed as a nonlethal means to subdue violent or fleeing subjects. Several reports have been published on the safety and efficacy of, as well as injury profile from, police Tasers. Documented urologic involvement is rare. The sequela of an electrical current from a Taser gun to the testis in regard to both short- and long-term functions is unknown. Herein we present a case of penetrating trauma to the scrotum from a Taser dart. UROLOGY 88: e5, 2016. © 2016 Elsevier Inc.

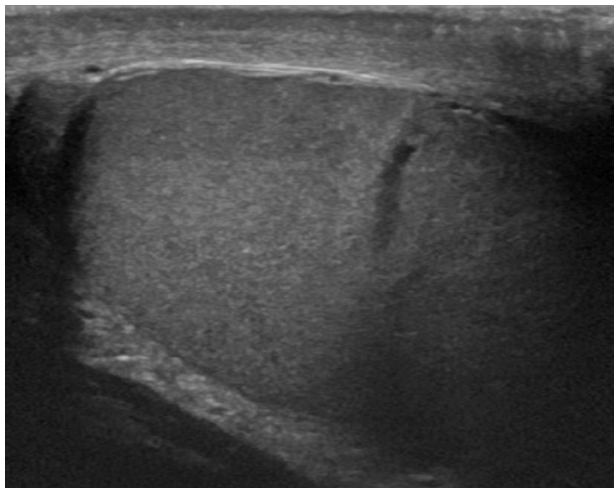


Figure 1. Ultrasound of the right testicle revealing penetrating trauma.

A 24-year-old male was brought to the emergency department by police after being subdued with a Thomas A. Swift's Electric Rifle (Taser). The barb penetrated his right hemiscrotum, which was manually extracted. Scrotal ultrasound revealed a 1.5-cm tract in the mid-right testicle with adjacent hemorrhage (Fig. 1). Scrotal exploration revealed a puncture through the tunica albuginea with underlying hematoma. A small amount of thermal damage was noted at the puncture site but no immediate damage to the intratesticular contents.

Understanding the mechanism of injury begins with exploring the basic design of the Taser. Tasers provide non-lethal means of subduing subjects. Two metallic darts are fired (one propelled straight while the other at an 8° downward angle). The barbs are 4 mm in length with a fishhook



Figure 2. Example of Taser barb.

at the distal aspect (Fig. 2)¹ and travel at a velocity of 180 ft/second, designed to penetrate clothing and skin. Tasers have a maximal voltage output of 50,000 V with a high-frequency but low-amplitude current.² Rapid electrical pulses cause involuntary muscle tetany and incapacitation,³ but theoretically do not cause electroporation (cell membrane damage) or thermal injury.⁴ Fortunately, Taser-related scrotal trauma is rare with only 1 previously reported case.⁵

References

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Financial Disclosure: The authors declare that they have no relevant financial interests.

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Submitted: November 2, 2015, accepted (with revisions): November 5, 2015