

## Case Report

## Ballistic Trauma of the Scrotum with Rupture of the Testicular Tunica Albuginea: A Case Report at Sominé Dolo Hospital in Mopti (Mali)

Mory Kone<sup>1\*</sup>, Thioukany David Théra<sup>1</sup>, Moulaye Magassa<sup>2</sup>, Dramane Cisse<sup>1</sup>, Souleymane Diaby<sup>1</sup>, Djibril Traoré<sup>1</sup>, Youssef Fofana<sup>3</sup>, Alassane Diarra<sup>3</sup>, Kekoro Soumano<sup>4</sup>, Kassim Koné<sup>4</sup>, Bakary Kone<sup>4</sup>, Souleymane Ongoiba<sup>5</sup>, Ousmane Kone<sup>6</sup>, Salif Kone<sup>1</sup>

<sup>1</sup>Surgery Department, Sominé Dolo Hospital (Mopti)

<sup>2</sup>Urology Unit, Fousseyni Dao Hospital (Kayes)

<sup>3</sup>Medical Department, Sominé Dolo Hospital (Mopti)

<sup>4</sup>Operating room unit, Sominé Dolo Hospital (Mopti)

<sup>5</sup>Urology Department, Gavardo Mali Hospital (Bamako)

<sup>6</sup>Markala Reference Health Center (Ségou)

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**Abstract:** Since 2012, Mali has been going through a security crisis, characterized by armed attacks against civilians and soldiers; in the form of terrorist attacks or ambushes using different vulnerable agents. The lesions observed are often multiple and serious and can affect all organs to varying degrees. We report a case of ballistic trauma to the right scrotum with rupture of the testicular tunica albuginea in a soldier at his guard post in central Mali. This was a 28-year-old military patient, married, father of a child and with no medical or surgical history. The onset would go back a few hours approximately during an armed attack on their guard post located 30 kilometers from the hospital. Examination of the wound showed a bleeding albuginea with devitalization of a large part of the noble testicular tissue. The patient was hemodynamically stable and the operative blood test was normal. The abdominopelvic ultrasound was unremarkable. A debridement of the necrotic tissues was performed followed by closure of the tunica albuginea. The postoperative course was satisfactory. The patient received antitetanus serum therapy.

**Keywords:** Trauma, Ballistic, Tunica Albuginea, Testicular, Mopti, Mali.

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## INTRODUCTION

Firearm injuries are defined as any injury produced on the human body by proximity or the shock of a firearm [1]. Mali has been going through a security crisis since 2012, characterized by armed attacks against civilians and soldiers; in the form of terrorist attacks or ambushes with the use of different vulnerable agents.

The injuries observed are often multiple and serious and can affect all organs to varying degrees. Urogenital gunshot wounds are relatively uncommon; according to several studies, they constitute 6 to 11% of all firearm trauma [2, 3]. Traumatic injuries to the scrotum caused by firearms are much rarer and involve the patient's reproductive function [4].

We report a case of ballistic trauma to the right scrotum with rupture of the testicular tunica albuginea in a soldier at his guard post in central Mali.

## OBSERVATION

This was a 28-year-old military patient, married, father of a child and with no medical or surgical history. He was admitted to the emergency department for firearm trauma to the external genitalia. On admission, the injured man was very anxious. The onset would go back a few hours approximately during an armed attack on their guard post located 30 kilometers from the hospital. Physical examination found a lesion of the right testicle with rupture of the testicular tunica albuginea (**Figure 1**). Examination of the wound showed a bleeding breakdown of the tunica albuginea with devitalization of a large part of the testicular noble tissue (**Figures 2 and 3**). There was a tangential wound at the level of the posterior part of the right thigh involving the soft parts. The rest of the external genitalia was unremarkable.

The patient was haemodynamically stable and the operative blood test was normal. The abdominopelvic ultrasound was unremarkable.

\*Corresponding Author: Mory Kone

Debridement of the necrotic tissues was performed followed by closure of the tunica albuginea.

The postoperative course was satisfactory (**Figure 4**). The patient received antitetanus serum therapy.



**Figure 1: Rupture of the testicular tunica albuginea**



**Figure 2: Devitalization of the noble testicular tissue**



**Figure 3: Testicle after necrosectomy**



**Figure 4: The bursa after one month postoperatively**

## DISCUSSION

External genital injuries are rare and are due to their anatomical location in the perineum, which is an anatomical region that exposes them to wounding agents. This area is a small, hidden surface and does not constitute a ballistic target. These external genital injuries by firearms represent 1 to 2% of all war wounds and 29 to 56% of all urogenital wounds.

In Senegal BAH and colleagues reported six cases in four years [5]. Simhan reported 97 cases of scrotal gunshot wounds in 20 years in the USA [6], while in Yemen Ghilan described 20 cases of external genitalia injuries by gunshot between 2005 and 2008 [7]. This low frequency results from the fact that the external genitalia are not a frequent target of gunshot attacks.

Open trauma to the external genitalia is rarely isolated, it is frequently associated with muscular and/or visceral injuries [6, 7]. The most frequent associated injuries are muscular injuries of the limbs; this is the case in our patient who had a tangential wound affecting the soft part of the posterior part of the right thigh. This frequent association is probably explained by the anatomical proximity of the proximal part of the lower limbs with the external genitalia.

## CONCLUSION

Gunshot wounds to the scrotum are rare. They are serious and jeopardize the prognosis of reproduction. Surgical treatment with repair of the tunica albuginea gives good results.

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