

Extraction of a Projectile in the Medullary Canal at the Somine Dolo Hospital in Mopti

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Abstract

Case Report

Gunshot wounds have become a daily occurrence at the Dolo sominé hospital in Mopti in recent decades, among which we have seen all kinds of injuries and lodge projectiles. We report a clinical case of a 46-year-old farmer, a gentleman who was the victim of a firearm assault that caused a wound with a reception on the left arm, the projectile of which is lodged in a very unusual area, the humeral medullary canal in the different segments of the human body. The aim of this work was to describe the management of this injury in accordance with the principles of war surgery.

Keywords: Wound - Firearm - Projectile Extraction.

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INTRODUCTION

Gun injuries are a real public health problem in the context of violence and insecurity in low- and middle-income countries [1]. Mali is no exception; For several decades, like the entire Sahel-Saharan sub-region, the whole of the Sahel-Saharan sub-region has been facing major security challenges. They are responsible for a high number of admissions to emergency departments in health facilities and an increase in the mortality rate [2].

Ballistic trauma is the consequence of the penetration into the body of a projectile: bullet, lead, metal fragment from the casing or contents of an explosive device (grenade, mine, shell, bomb, etc.) [1]

No physical theory can predict with certainty the behavior of a projectile in the human body [3]

Trauma to the upper limb is the most common of the sites of the injury [4-5]

CLINICAL OBSERVATION

He is a 45-year-old farmer; referred by the reference health center (CSREF) of Djenné for firearm wound (BAF) of the right arm.

The incident is said to have occurred on 02/09/2024 at around 7 a.m. in Sanye in the Macina circle, Mopti region of Mali; he would have been attacked by unidentified armed individuals with projectile reception at the level of the right arm, secured by witnesses on the spot immediately brought to the CSREF of Djenné where he received first aid (thought) before being referred to Sominé Dolo Hospital in Mopti for specialized care.

Having as a history of diabetes 3 years ago in regular care under Glucophage 500mg; One Admitted to the emergency department of the Sominé Dolo Hospital in Mopti at 1 p.m (1) tablet twice (2) times daily, never operated.

General Review

Patient rated WHO II, Glasgow rated 15/15, the conjunctiva is normo colored, no cyanosis. Muscle strength 3/5 Oxygen saturation is 98% at room air blood pressure is 140/68 mmh, heart rate is 110 beats per minute, temperature is 37°C

Physical Examination

Patient wearing a bandage on the right arm with an attitude of trauma to the upper limb; with a punctiform wound on the distal 1/4 of the arm on the lateral side, without deformity, painful, no cracking or abnormal movement When the limb concerned is mobilized, motor

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skills and mobility are preserved, also the distal pulses are perceptible. The contralateral limb is unremarkable

Conduct:

- Hospitalization, venous line
- Treatment received in the emergency room:
- Analgesic: Paracetamol 1g infusion, Trabar 50 mg IVL,
- Sérum antitétanique (SAT), vaccin antitétanique (VAT),
- Antibiotique : Céfazoline 2g en IVD
- Abundant cleansing with salt serum
- **Paraclinical examination:** X-ray of the right arm face and profile,
- Groupage rhésus : O de rhésus positif
- Hemoglobin levels: 11g/dl
- Blood sugar: 1,26g/l
- **Surgical treatment:** (02/09/2024) in the operating room

The patient has benefited from the treatment according to the protocol of war surgery. On an ordinary table, patient in supine position, under local anesthesia,

regional supraclavicular peripheral nerve block, right upper limb. Asepsis measurement with Yellow Betadine clamping universal standard Enlargement of the wound through an incision in orange quarters about 10 to 12 centimeters, excision of the edges of the wound on the lateral side of the right arm; large debridement of necrotic and subcutaneous fatty muscle tissues, fasciotomy, removal of contused tissues; bone decortication by enlarging the canal entrance door as a way of facilitating the extraction, once the projectile extraction has been carried out, abundant washing with physiological dirty solution, for a first time we leave the wound open with an American type floppy dressing; Making of a brachio-antebraquial plaster splint ,a day 5 delayed primary closure.

Postoperative Treatment:

Injectable paracetamol 1g every 06h, tramadol 100mg every 08h Cefazoline 1g every 08h for 72h according to the ICRC Protocol Glucophage 500 with glycemic monitoring according to the diabetologist Evolution: the aftermath was simple dressing twice a week until healing, the hand had a good coloration, motor skills and sensitivity were normal.



Figure 1



Figure 2

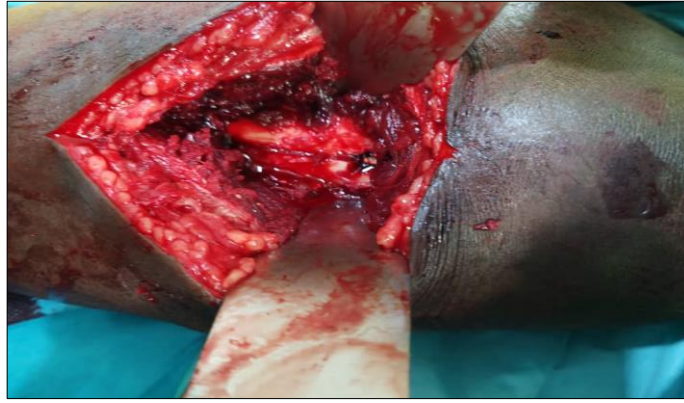


Figure 3



Figure 4



Figure 5



Figure 6

DISCUSSION

Currently, given the upsurge in firearm injuries following farmer/herder conflicts and an increase in juvenile delinquency requiring special orthopedic or surgical care. The purpose of this surgery is to perform the projectile extraction while minimizing complications in order to allow a rapid and complete recovery of mobility. In most cases the projectile is located in the soft part or near the bone after having caused a complex fracture, few studies have mentioned the presence of projectile in the medullary canal preferably the upper limb which is most often the reflexively active defense element, this predominance of localization is identical to that of a study of firearm wound carried out in Tunisia by S Bardaa *et al.*, [5], a prophylactic fasciotomy was indicated to avoid compartment syndrome, this gesture is similar in another study carried out in N'Djamena [6-8].

CONCLUSION

Firearm injuries have been on the rise in recent years, both in civilian and military practice. The management of firearm injuries has unfortunately become the daily life of the emergency department at the Somine Dolo Hospital. This management is carried out according to the standards of war surgery, this study helped us to highlight the good evolution in the management of firearm injuries by minimizing post-traumatic sequelae.

Conflict of Interest: The authors do not report any conflicts of interest

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