



Bullet Injury of the Chest: The Traditional Practice of Bullet and Pellet Extraction: A Myth or Magic?

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Abstract

Background: Bullet injuries to the chest are common in our environment resulting directly or indirectly from rising poverty, economic hardship from rising banditry, cheap and availability of hard drugs, in our context leadership by manipulation, political thuggery, police brutality, agitations for self-secession among many other reasons and lately the sequelae of COVID-19. The combination of all these have impoverished the people and majority seeks a cheap alternative means of treatment including extraction of pellets and bullet trapped in the body through gunshot injuries.

Objective: Report an experience with bullet/pallet injury to the chest from gunshot and the practice of traditional extraction. How reliable is this practice? As seen at the Division of Cardiothoracic Surgery, Department of Surgery, University of Calabar Teaching Hospital Calabar, Nigeria.

Introduction

Gunshot injury to the chest, account for 10% of Penetrating Chest Injury in the United State of America [1]. Incidence varies worldwide, as high as 95% in those countries engaged in war. In Nigeria Udosen et al. in Calabar reported an incidence of 8.2% [2], Nottidge et al. in Uyo reported an incidence of 15% [3] and Edino et al. in Kano reported an incidence of 15.6% [4]. In this increasing order but the traditional practice of metallic extraction of gun origin is common in west African and sub-Saharan regions of Africa but how reliable is this practice? We have thought it wise to find out these practices and how they work, these practice of sucking bullet and pellet wounds or application of herbal paste to extract metals of gunshot origins and to be in a vantage position to educate citizen of these subregion. The first documented incidence where a non-metal was used to lift a metal from the water was in 2 Kings 2 verse 5 to 7. Currently, in the world there are a lot of similarly acts therefore verification is needed.

Case Summary

Case 1

We present I JE a 33-year-old nurse who presented to us on account of a feeling of a foreign body in the right side of her chest. She was in the bathroom in her house in Calabar municipal local government of the state capital when she felt a sudden sharp pain in her right chest wall, with a mild bleeding and an entry wound. Further, enquiring showed the object that injured her had passed through the roof and the ceiling of the bathroom. The acute pain subsided with some analgesics and antibiotics but the feeling of a foreign body persisted. She presented in a peripheral facility after the incident was reported to the police. A chest X-ray done revealed a bullet lodged on her right anterior chest wall. She was under pressure and taken to a Traditional Bullet/Pallet Extractor (TPE), who do some incantations and sucked the entry wound and, in the process, extracted the bullet (Figure 1) but the feeling of a foreign body persisted informing her verbal referral to us. A repeat chest X-ray (Figure 2) still showed the bullet in the same position which the extractor claimed to have been extracted. On general physical we meet a healthy-looking lady not in any form of distress. Chest examination revealed a healed scar of an entry wound in the fourth intercostal space lateral to the sternal edge and a foreign body immediately underneath the inferomedial border of the breast below pectoral major muscle in between the 6th and 7th ribs (Video 1).

Case 2

We present UOO a 25-year-old businessman, who presented to us through the Accident and Emergency Department with a week history of right sided chest injury from an accidental

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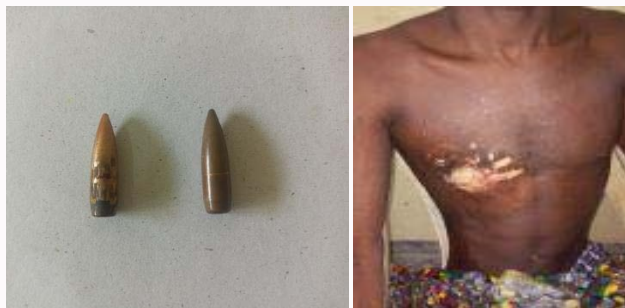


Figure 1: TPE & Entry wound.

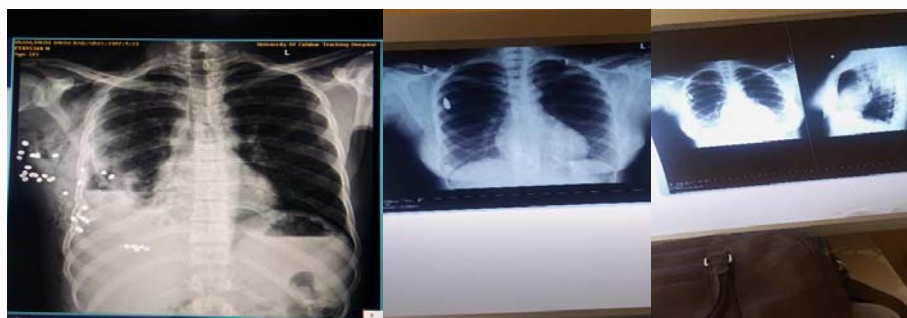


Figure 2: Chest X-rays & repeated.

gunshot from a locally made hand rifle in a burial at the grave site at Yakurr local government of Cross River State. He bleeds profusely but did not feel dizzy nor collapsed. He was taken to a peripheral hospital where he was resuscitated and bleeding controlled with pressure dressing. He was given antibiotics and analgesics. He left the hospital the same TPE who did some incantations, took some herbal concoction and sucked the wound and extracted 36 pellets. The wound became infected informing the referral to cardiothoracic surgical unit for definitive management. At presentation in A& E he was further resuscitated, antibiotics, analgesics were given and chest X-ray done which showed multiple pellets against the claim that all the pellets were extracted. On general physical examination we met a toxic ill-looking young man in painful and respiratory distress with a respiratory rate of 36 cycles per minute. He is febrile with a temperature of 37.6°, he is moderately pale and hypotensive with blood pressure of 90/50 mmHg. Chest examination showed an offensive smelling ragged sucking entry wound of five centimeters on the right anterior chest wall with right sided chest wall subcutaneous emphysema and an open right hemopneumothorax (Figure 2). The numbers of pellets still in the right chest wall numbered 36 pieces. He was admitted to the ward, blood sample collected for full blood count, serum electrolytes. He was screened for human immunodeficiency virus, Hepatitis B and C virus, wound swab was taken for microscopy, culture and sensitivity. A right closed thoracostomy tube drainage was passed, the right anterior chest wall wound was debrided and daily dressing done with pure honey. Antibiotics (ceftriaxone and metronidazole) continued with analgesics. This is the result after a week of treatment (Figure 3, 4).

Discussion

Studies have shown that blunt chest trauma is not commonly associated with war or civil strife, however penetrating trauma is [5]. Males are more often the victims than females [5-11], and it occurs



Figure 3: Hole on the ceiling made by the bullet.



Figure 4: Entry wound on the right anterior chest wall.

commonly in 20 to 40-year age range [5]. Penetrating chest trauma is most often caused by gunshots.

Gunshot injury is the commonest cause of penetrating chest trauma as documented in other studies [1-11] and non-gunshot-related incidents such as stabs, road traffic accidents, and impalements.

Studies worldwide [6] have also shown that most of these injuries can be managed conservatively [12]. Early recognition and timely

treatment of life-threatening injuries, better resuscitative techniques, preoperative care, and effective surgical procedures can significantly affect outcomes in these patients.

Globally 10% of all trauma admissions results from chest injuries and 25% of trauma related deaths are attributable to chest injury. In the USA, 25% of the 100,000 annual traumatic deaths result from trauma [13].

In West Africa subregional the incidence is not available but Alain et al. [14] in Cameroon reported an incidence of 65% for blunt and 35% for penetrating chest injury. In Nigeria no round study has been done but figures ranges from 23% to 61% for penetrating chest injury and 38% to 77% for blunt chest injury [6-11].

The etiology of chest trauma is similar World Wide with little variation penetrating chest injury is mostly caused by gunshot, stab, arrow and impalement while blunt chest injury is caused commonly by motor vehicular accident.

Age, type of chest trauma, early presentation, present of comorbid conditions, present of associated injuries and presence of complication can affect outcome. The mortality rate of patients having chest trauma ranges between 4% and 25% worldwide [6-11].

Conclusion

Poverty and ignorance are twin social diseases in west Africa and sub-Saharan Africa. The present global hardship caused by COVID-19 pandemic, job loss, rising cost of living, the free fall of the naira to the United State of America dollar and the removal of subsidy has made this non-orthodox practice more acceptable without results. Although, these look initially cheap but the cost at the long term is costly. The cost of extraction is between eighty thousand to five hundred thousand naira or between eighty to five hundred dollars. This is excluding managing these complications.

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