

# Case Report

## GORE INJURY IN AN URBAN SCENE IN NIGERIA

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### ABSTRACT

**Aim:** Gore injuries are common in rural areas but animals within the city could pose similar risk. This case report highlights gore injury in an urban dweller who had a single system injury and its subsequent management. It aim to raise vigilance that this could become more prevalent with open grazing becoming a norm in our society.

**Case report:** This report presents a case of an urban male motorcyclist who was gored by a cow from a herd grazing within the city while riding his motorcycle. He presented with complaints of dyspnea and right sided chest pain. He had an open pneumothorax. The wound was debrided, closed, primarily and a right sided closed thoracostomy tube drainage system was instituted. He improved satisfactorily and was discharged from in-patient care on the 5<sup>th</sup> day post trauma.

**Conclusion:** Presentation of Gore injury could vary from a single system injury to complex clinical situation involving multiple organs. Increasing frequency with varying demographics could be expected if open grazing, even in urban areas, continues unabated.

**Keywords:** Gore injuries, Open pneumothorax, Chest injuries.

### INTRODUCTION

Gore injuries are reported to be common in rural areas where bulls and cows are used for agricultural purposes<sup>1</sup> but more recently, roaming of cows and other animals around school playgrounds, golf courses, street shoulders and other areas of public aggregation is now a common sight in our cities. These animals can cause serious injuries by their appendages; horns and hoofs and poses a significant risk and safety concerns to human and vehicular traffic. This in addition to the skirmishes and violence

that have engulfed our country due to farmers and herders clashes that have claimed thousands of lives with millions of naira worth of properties lost/ destroyed.<sup>2</sup> Conflict from open grazing accounted for 35% of all reported crises between 1991 and 2005 as documented in a Nigerian study.<sup>3</sup> This case report is to highlight an injury sustained from exposure to grazing animals within the city center of an urban community and its management.

### CASE REPORT

21 year old right handed male who was gored by a cow from a herd grazing within the city while riding his motorcycle along a main road within the city. He presented to the

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emergency room with complaints of difficulty with breathing and right sided chest pain which was noticed after he was gored, two hours prior to presentation.

The patient was admitted into the emergency room, he was dyspneic and tachypneic. He had a respiratory rate of 32 cycles per minute, pulse rate was 112 beats per minute with blood pressure range between 110/72-130/86. Peripheral oxygen saturation was 92% on room air. He was conscious and oriented. There was an 8cm penetrating wound on the superior part of the right hemithorax, 4 cm below the right clavicle with tenderness and subcutaneous emphysema more over the upper right anterior chest wall. (FIGURE 1) There was contused muscles visible from the wound site. He also had skin abrasion just medial to the right nipple. He had reduced breath sound over the right hemithorax. There was no evidence of pulse deficits or differential blood pressure readings on both upper limbs. Examination of the other systems were essentially normal. A clinical diagnosis of open pneumothorax secondary to gore injury was made.

He was administered oxygen by nasal prongs at 5L/min, intravenous access was secured, relevant blood investigation samples were collected and analgesia (intra muscular paracetamol 600mg stat and diclofenac 75mg stat), anti-tetanus toxoid was given. Hemoglobin concentration was 10.7g/dl, serum electrolytes were within acceptable values. A right closed thoracostomy tube drainage was done with a size 28 chest tube

(MEDIPLUS<sup>R</sup> Chest Drainage Catheter. Shree Umiya Surgical PVT. LTD. Mfg. D.L.No.: G/28/1329) and drained 250mls of hemorrhagic effluent. The wound was debrided and closed, primarily in the emergency procedure room under local anesthesia with xylocaine infiltration.

Post procedure chest x-ray showed no evidence of residual collection with some area of lung consolidation with anterior fracture of the right second rib (See FIGURE 2). He was commenced on daily dressing with normal saline of all chest wounds, antibiotics (IV Ceftriazone 1g daily) and analgesics (paracetamol and diclofenac sodium). He also had scheduled chest physiotherapy and was taught to self-exercise with incentive spirometer. Vital signs remained within normal limits.

By the 4<sup>th</sup> day post-trauma, the wounds had healed, see figure 3, the lungs had re-expanded with no more residual thoracic collection and the right closed thoracostomy tube discontinued. He was subsequently discharged from in-patient care on the 5<sup>th</sup> day post trauma. He has not presented to the follow-up clinic till date.

## DISCUSSION

Gore injury is common in the rural farming communities where animals are used to help in sub mechanized farming, dairy purposes and in parts of Europe where bull fighting is a common sport.<sup>1,4</sup> Unbridled open grazing which is common in developing country like Nigeria<sup>3</sup> has led to increased exposure to

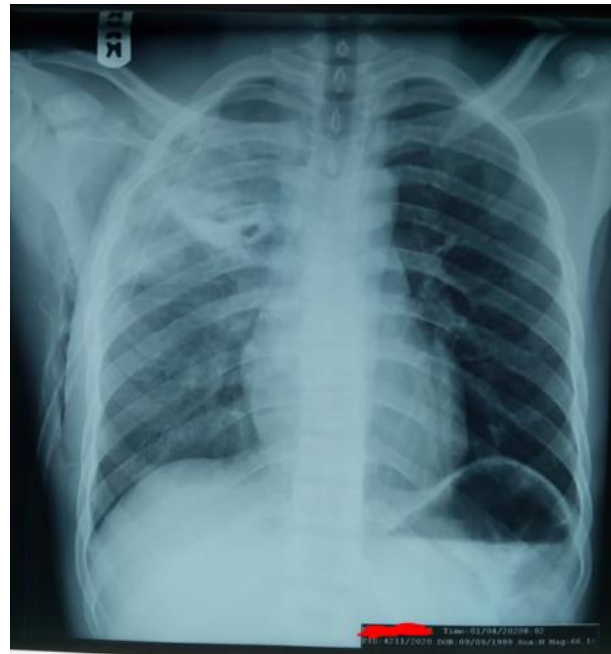
these animals. Reports of female victims are rarely found in literature and gore injuries are much published to be a hazard for farmers, unbridled grazing in urban areas may lead to increase incidence and a change in the present demographics of gore injuries. Our patient is a male, urban motorcyclist who was attacked by a herd grazing within the city.

Animal injuries to the chest are rare. Most reports have rather depicted injuries to the eyes, perineum, abdomen and palate.<sup>4,5,6</sup> In an analysis of mechanism of chest trauma done in Zaria, Nigeria, chest injury from animal attacks constituted 2.4% of injuries

**FIGURE 1:** Showing the site of gore injury on the right upper part of the anterior chest wall.



**FIGURE 2:** Chest x-ray PA view, showing evidence of lung consolidation with a chest tube inserted into the right hemithorax. No residual collection. The fracture on the anterior 2<sup>nd</sup> right hemithorax ribs is not clearly seen.



seen over a twenty seven months period.<sup>7</sup> Other studies of penetrating chest trauma in Nigeria, did not record specific injuries due to animal gore.<sup>8,9</sup>

The abdomen and perineum are most commonly injured because of the anatomic relationship with the animal which leads with the horns and head when it feels threatened, charges and gore<sup>1</sup>. Injuries around the head arise from close contact with the animals, palate injury was reported in a male who was trying to adorn an ornament on the bull<sup>5</sup>. The case in our report was riding

**Figure 3:** Showing the wound with chest tube in situ just before removal of the right hemithorax closed thoracostomy tube.



on a motorcycle. This speculatively, puts his chest at a level suitable for replacement of the abdomen and perineum with respect to the bull head. More commonly, the right side of the body is most affected. It is thought that this arises from that the nature of right sided people to defend themselves by advancing that side forward.<sup>1,10</sup>

Penetrating chest injury from gore injury, as shown, could lead to lung contusion, rib fractures, injury to the subclavian vessels, clavicular fracture, pericardial and aortic injuries. These injuries could be grave,

although the index case appeared to have been spared from grave injury which could be to any of the intrathoracic vessels/ organs and may have worsened his prognosis. He however, sustained in addition to the penetrating injury, a single rib fracture. We must state that radiologic investigations in this case was limited to chest x-ray as the chest computed tomography scan was not readily available during his inpatient care. He had an uneventful clinical course.

In conclusion, gore injuries vary from mild to complex depending on the extent of the organ involvement. Our patient had mainly chest wall injuries and recovered uneventfully. With the increased presence of animals in the streets of towns from unbridled open grazing, we expect an increase in frequency of gore injuries.

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