

# Penetrating Neck Injuries - Psychosocial Challenges In Delayed Presentation

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## Citation

E E Akpo. *Penetrating Neck Injuries - Psychosocial Challenges In Delayed Presentation*. The Internet Journal of Head and Neck Surgery. 2013 Volume 7 Number 1.

## Abstract

**Background:** Delayed presentation of penetrating neck injuries is rare in surgical practice. Among the few cases reported, the psychosocial challenges that arise when foreign bodies are stuck in the neck over a prolonged period of time following penetrating neck injuries have never been addressed in the world literature. This paper presents the psychosocial issues associated with delayed presentation of penetrating neck injuries using a case scenario.

**Patients and Method:** The case of a 27-year old man with a penetrating neck injury who had a piece of glass stuck in his neck for 15 months prior to review is presented.

**Results:** The patient underwent surgery and extraction of the foreign body with uneventful recovery and was discharged from hospital after three days.

**Conclusion:** The need for immediate review by an expert after first aid treatment is encouraged in all cases of penetrating neck injuries no matter how trivial the injury in order to forestall the psychosocial distress that follows. Creation of awareness by the attending physician should not be overlooked.

## INTRODUCTION

Delayed presentation of penetrating neck injuries is uncommon in surgical practice. Majority present immediately after the incidence. In rural centers in resource poor settings where expertise is lacking, first aid is provided by junior doctors or health assistants who refer such patients to experts in level 1 trauma centers. However, when the patient feels s(he) is stable, s(he) declines the referral and seeks alternative medication until late when catastrophe occurs or the consequence of the retained foreign body becomes unbearable. Pending presentation, there are psychosocial issues that these subset of patients are faced with that have not been previously documented in the world literature. This paper presents the psychosocial problems of a retained foreign body in the neck using a clinical case scenario.

## CASE REPORT

A 27-year old man presented in the surgical outpatient clinic with a 10-month history of continuous purulent discharge from the left posterior aspect of the root of the neck. Fifteen months earlier, in an attempt to settle a scuffle between two friends, he was stabbed with a broken bottle from behind. He presented at a primary health care center immediately where the entry point was irrigated, sutured primarily and referred

to a tertiary center. Being stable, he opted for alternative medical treatment where he had serial concussions applied over a swelling on the neck and was told that whatever is there will extrude on its own. Five months later he observed some offensive discharge from the neck associated with a progressive neck swelling over A 10-month period forcing him to present 15 months after the primary injury.

## Figure 1

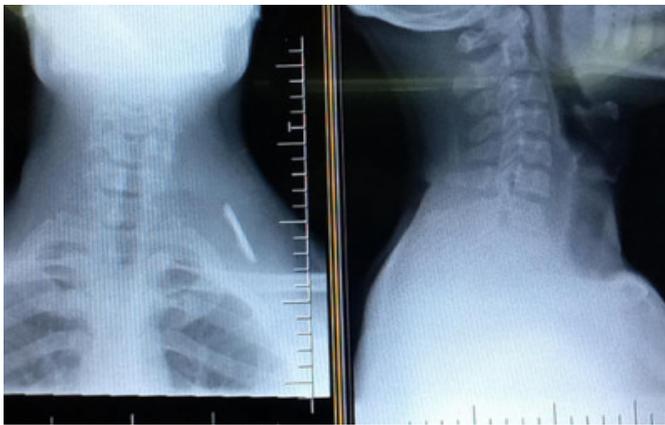
Discharging sinus in a 27-year old man prior to surgery 15 months after the primary penetrating neck injury



Examination revealed an anxious but stable patient who was not pale or febrile and not in obvious respiratory distress. No limitation of limb movement. He had a non-tender, non-pulsatile, firm-to-hard swelling on the root of the left side of the neck laterally and a discharging sinus 0.5 x 0.5cm on the posterior aspect of the neck placed at the lower end of a 7cm healed scar (Figure 1). The left cervical nodes were enlarged. The vital signs were stable. Culture of the exudate yielded Staph. aureus sensitive to ciprofloxacin. Cervical X-rays revealed a Zone I radio-opaque material measuring 0.5 x 4cm placed 4cm lateral to the left sternoclavicular joint and about 2.5cm superior to it (Figure 2). A CT angiogram could not be done for financial reasons.

**Figure 2**

Cervical x-rays. The anteroposterior view (left) showed a foreign body on the root of the neck (white object).



At surgery with the patient intubated and placed in the right lateral position, an 8cm crease incision was made in the root of the neck and dissected until the piece of glass measuring 4.0 x 3.2 x 0.5 cm was reached and retrieved from a cavity lined by granulation tissue and filled with pus above the dome of the left lung lateral to the major vascular bundle (Figure 3 and 4). The cavity was irrigated with 200mg of ciprofloxacin in 500ml of normal saline and the wound closed over a drain applying vicryl 2-0 subcuticular stitches on the skin leaving the sinus drain site open to be dressed. The drain was removed after 24 hours.

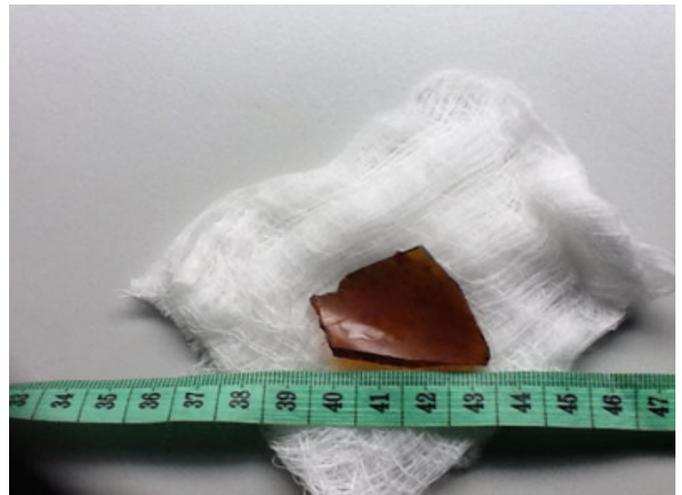
**Figure 3**

Shows the remnant piece of bottle stuck in the neck being retrieved



**Figure 4**

The retrieved piece of broken bottle that was stuck in the neck for 15months. It measured 4.0 x 3.2 x 0.5 cm.



Results: Recovery was uneventful and the patient was discharged after 48 hours. He was followed up for 3months.

**DISCUSSION**

Penetrating neck trauma accounts for 10% of all trauma injuries.<sup>1</sup> In stable patients with delayed presentation of foreign body in the neck following penetrating neck injuries, the use of CT angiogram is advised to delineate vascular or aerodigestive structural injuries prior to exploration.<sup>2</sup> In resource poor settings where CT centers are few and most patients are unable to afford a CT Scan, the managing physician is forced to explore the neck in the absence of CT findings when faced with such dilemma.

The neck is divided horizontally into three zones.<sup>3</sup> Each

zone has neurovascular and aerodigestive structures which can be damaged by injuries which penetrate the neck. Zone I lies between the clavicles and the cricoid cartilage; it carries the highest mortality because of vascular injury and high-risk surgical exploration.<sup>4</sup> Zone II is superior to Zone I and extends as far as the angle of the mandible. Zone III is the area between the angle of the mandible and the base of the skull. Zone II injuries are the most common followed by Zone I and finally Zone III.<sup>5</sup>

This patient was first seen in a primary care center, had his external wounds sutured primarily (Figure 1) and referred to a tertiary center where a CT angiography was ordered but the patient was unable to afford and he continued to discharge from the sinus in the neck. The continuous offensive discharge caused him some psychological distress. In addition, ridicule from peers on the offensive odour emanating from him over a 10-month period made him to withdraw from his peers, public appearance and colleagues which further worsen his income potential and his quality of life. He indicated that he lost his self esteem.

The little funds this patient had were offered to the traditionalist who applied concussions over the swelling in the neck insisting that the foreign body would extrude on its own but it never did. This complexity further depressed the patient and delayed his presentation to the tertiary center. The main reason for delay in presentation was thus finance.

The fear of the death as an eventual outcome was a major

problem to this patient creating an anxiety state each time he remembered he had a broken piece of bottle stuck in his neck. This fear could be supported by an earlier report of a delayed rupture of both the carotid artery and internal jugular vein from the presence of retained foreign body in the neck.<sup>6</sup>

### **CONCLUSION**

The need for immediate review of all penetrating neck injuries by an expert after the initial first aid treatment is highly encouraged no matter how trivial the injury may be in order to forestall the psychosocial distress that follows. Awareness creation by the attending physician should not be overlooked.

### **References**

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