Arrow Shot Injury To The Neck
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Citation

Abstract
Arrow shot injuries are fairly common during harvesting period in northern Nigeria as a result of clashes between cattle rearers and farmers, whose farms are located close to the grazing areas demarcated by states in northern Nigeria. The federal medical center Nguru is the only tertiary referral center in Yobe state and the neighboring communities. Accidental arrow shot injuries among nomads are rare. This report presents a 15 year-old boy who was accidentally shot in the neck with an arrow by a nomadic youth while playing. He was promptly referred to a tertiary centre where the arrow was successfully removed.

INTRODUCTION
Arrow shot injuries are fairly common during harvesting period in northern Nigeria as a result of clashes between cattle rearers and farmers, whose farms are located close to the grazing areas demarcated by states in northern Nigeria. The federal medical center Nguru is the only tertiary referral center in Yobe state and the neighboring communities. Accidental arrow shot injuries among nomads are rare. This report presents a 15 year-old boy who was accidentally shot in the neck with an arrow by a nomadic youth while playing. He was promptly referred to a tertiary centre where the arrow was successfully removed.

CASE REPORT
A 15 year-old nomadic boy was hit by an arrow that was shot randomly by some nomadic youths in a suburb of Gashua, in Bade Local Government area, Yobe State, Nigeria, while celebrating one of their annual festivals. The arrow was impacted on the right side of the neck with profuse bleeding which was controlled with pressure packs at the village health centre. He was then referred to federal medical centre (FMC) Nguru, where he presented with impacted arrow on the right side of the neck, with difficulty and pain on swallowing, but no difficulty in breathing, the voice was muffled. No loss of consciousness, No weakness of the limbs.

Examination revealed a conscious young boy mildly pale afebrile to touch (Temp 37°C) respiratory rate of 22 beats/minutes and blood pressure of 110/75 mmHg.

An arrow was impacted on the right side of the neck (Fig1 and 2) about midway between mastoid antrum and munubrium sterni, with marked tenderness at the point of entry and subcutaneous emphysema. His chest was clinically clear.

Abdominal and central nervous system examinations were essentially normal. Antero-posterior and lateral X-ray of the soft tissue of the neck showed a long metallic foreign body in the neck traversing the right side of the neck at the level of the larynx and third cervical vertebra (fig3 and 4) complete blood count revealed a packed cell volume of 35% and other parameters are within normal limits, blood chemistry were within normal limits.

Figure 1
An emergency neck exploration was done same day, Anesthesia was delivered via an orotracheal tube, the neck was open via Gluck, soerensons incision and a U flap was secured to the chin; the exploration revealed an arrow piercing the right carotid sheath (fig 5 and 6) but sparing both the common carotid artery the right jugular vein and impacted into the body of the third cervical vertebra. The carotid sheath was dissected, the pharynx and larynx were also freed on both side and lifted up and the arrow was removed gently via a screwing movement. And on close examination the fangs of the arrow were compacted on to the body of the arrow by the entry force (fig 7) which minimizes the trauma to the body of the C3 vertebra. Impacted length of the arrow in the neck is approximately 8.5cm. (fig 7) Patient had a pint of blood transfused intra operatively. The procedure was well tolerated and post operative recovery was uneventful (fig 8 and 9). He was discharged on the 5th post-operative day;
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Figure 5
Figure 5

Figure 6
Figure 6

Figure 7
Figure 7

Figure 8
Figure 8
DISCUSSION

Patient with penetrating injuries to the neck are operated as an emergent cases especially this patient with arrow shot who had the arrow impacted, is a mandatory candidate for exploration because of the depth of the arrow in the neck. Some authors advocate selective neck exploration as against immediate exploration emphasizing that pre-operative diagnostic evaluation reduce the incidence of negative exploration which is true for combat related injuries (Gunshot). However in arrowshot injuries particularly when the arrow is impacted exploration is mandatory to remove the arrow. The relevant investigations that were done are soft tissue X-ray of the neck(fig 3 and 4) complete blood count and blood chemistry. CT angiography were considered but are not available within the north eastern region, and the additional stress of transportation and the cost to access these test at nearest health facility are unaffordable to the parents.

As stated by Belinke et al. the decision to explore was based on clinical evaluation using criteria of unstable vital signs, bleeding, haematoma, subcutaneous emphysema, respiratory distress or neurologic deficit. Also Bell RB et al reports that the management of stable patients with neck injuries that penetrate the platysma has evolved into selective surgical intervention based on clinical examination and CT angiography and has resulted in minimal morbidity and mortality.

Most arrows in this part of the world are made with some fangs on the body of the arrow which cause more soft tissue injury as it penetrate the tissues which made it mandatory for immediate exploration.

In conclusion there is a need for government in both the state and local level to establish a fully functional specialist hospital equipped with all the necessary diagnostic and therapeutic facilities and a subsidized service rendered to the community.

References

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