

Post-Traumatic Indiscernible Foreign Body Neck- An Unusual Presentation

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Abstract: Penetrating foreign body in the neck should be given due diligence because of constellations of vital structures in the neck. Despite the advances in the imaging and surgical methods, penetrating injuries to head and neck with impacted foreign body still pose a challenge.¹ A 22 year old male, presented with swelling and pain in the right side of neck with difficulty in speech and swallowing following RTA. On clinical examination, there were abrasions over right side of mandible and palpable mass felt below angle of mandible on right side and also in left supraclavicular area. Indirect laryngoscopy and videolaryngoscopy revealed foreign body in the right pyriform fossa pushing right cricoarytenoid unit medially. CT neck with thorax revealed presence of radiolucent foreign body measuring about 20cm without damaging the vital structures. Patient was unaware of the penetrated foreign body in his neck. Patient was taken up for emergency wound exploration. Wooden foreign body, 22 cm length was retrieved in toto. Patient recovered well without any complications.

Keywords: Foreign Body, Neck, Post-Traumatic

1. Introduction

Penetrating neck trauma with accidental impaction of foreign body in neck are not infrequent especially in young and more common in males. The penetrating foreign body in the neck pose difficulties because of the constellation of vital structures in the neck.² The wooden foreign body creates more diagnostic difficulties and management could be difficult due to its easy fragility and infectious nature.³

2. Case Report

A 22 year old male patient presented with sudden onset of neck swelling with restricted movement and pain in the right side of neck following 8hours of RTA. He also complained of difficulty in speech and swallowing following the incident, but had no difficulty in breathing. On clinical examination he had multiple lacerated wound in the right side of face and neck. On palpation, there was a hard mass felt below angle of mandible on right side and in left supraclavicular area.



Figure 1: Patient at the time of presentation
Videolaryngoscopy revealed the presence of foreign body in right pyriform fossa pushing cricoarytenoid unit and AE fold medially with restricted right vocal cord mobility.



Figure 2: Foreign body on videolaryngoscopy

CT neck with thorax revealed the presence of radiolucent foreign body measuring 20cm piercing right side of neck below angle of mandible passing below hyoid and piercing lateral wall of right pyriform fossa sinus, passing behind cricoid cartilage and extending to left supraclavicular fossa by piercing left pyriform fossa sinus apex. The major vessels were found to be intact on both side. The vessels were pushed anteriorly on the right side and on the left side the foreign body was anterior to the vessels.

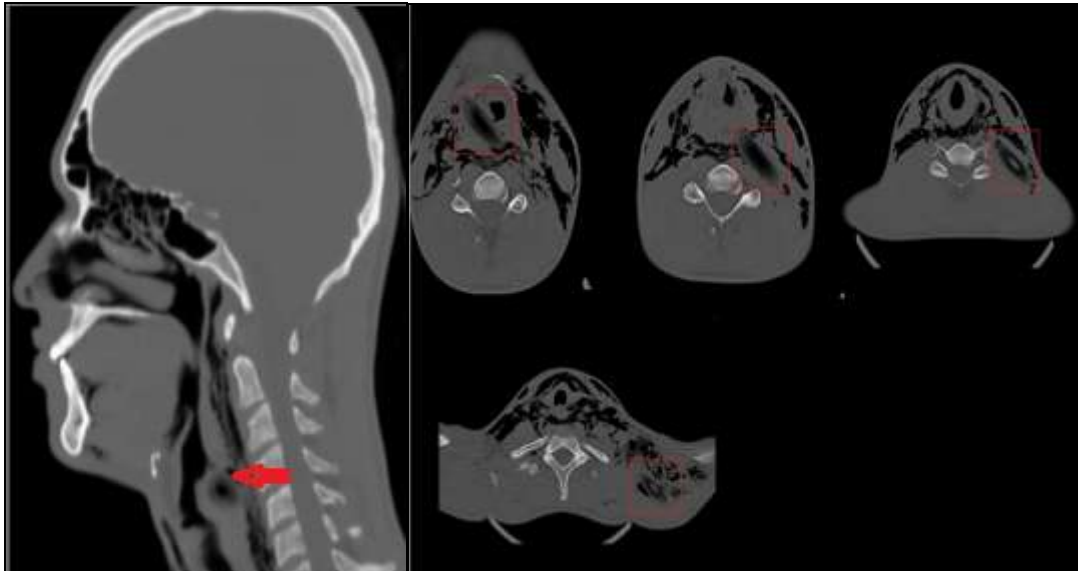


Figure 3: CT sagittal and axial plane showing foreign body

The patient was taken for immediate wound exploration under general anaesthesia. An incision was made in the right side of neck at wound site and the wooden foreign body pulled out in toto. Under endoscopic visualisation pharynx and larynx was inspected. Tear was noted on the right pharyngeal wall (entry wound) which was repaired. There was an exit wound at the junction of left lateral and posterior pharyngeal wall which healed by secondary intention. Postoperatively patient received intravenous antibiotics and analgesics with ryles tube feeding. patient recovered completely without any complications.

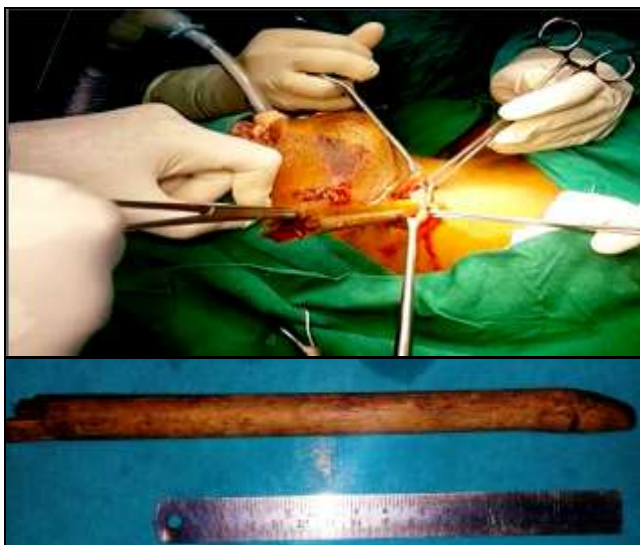


Figure 4: Wooden foreign body extracted out completely



Figure 5: Endoscopic examination showing entry and exit wound (instrument visualised through entry wound).



Figure 6 : On follow up after complete recovery

3. Discussion

Penetrating injuries to the neck have always been a source of concern both to the clinician as well as to the population. All such cases should be accorded importance and the wound explored thoroughly to rule out foreign bodies.

Penetrating injuries to the neck are associated with high morbidity and mortality rates owing to multiple vital structures present within this anatomic region.⁴ Following injury the normal anatomy could be altered because of edema or tissue destruction making diagnosis and retrieval more difficult.⁵

The aggregation of structures in a small volume makes them more vulnerable for damage in any penetrating injury.⁶

Thorough knowledge of the anatomy of the neck, physical examination and current recommendations for diagnosis and therapeutic intervention are necessary for the appropriate removal of foreign bodies in the neck region.⁴

Wooden foreign bodies are dirty and infectious because the porous organic material provides good culture condition for bacteria which may cause abscess.⁴

Also it may pose a diagnostic and therapeutic dilemma and requires immediate neck exploration and removal of foreign body.

The CT scan provides information about the integrality of aerodigestive tract, the neurovascular structures and the vertebral integrality as well as the course, tract and position of the foreign body in the neck.⁴

The wooden foreign body can exhibit extra challenges in evaluation of depth and amount of tissue injuries. However in this case, the detection of foreign body and its removal was unremarkable as the contour and extent of foreign body was delineated priorly through imaging.

Although CT is the prime investigation in detection of foreign body as reinforced in our case, studies have shown its role to be controversial thus contributing to its limitation.

A wooden foreign body can initially appear hypodensed on CT scan and consequently be misdiagnosed.⁷ Imokawa et al in their studies emphasized the misinterpretation of CT in the presence of wooden foreign body, recommending the role of MRI as an useful adjunct to CT in the detection of non metallic foreign body.

4. Conclusion

Penetrating foreign body in neck is potentially life threatening and challenging condition. Early and timely intervention minimizes the morbidity and mortality associated with it.

In case of wooden foreign body, early exploration and removal reduces the chances of wound infection resulting in favourable outcome.

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