

A RARE CASE OF INTRAORAL PENETRATING INJURY (IRON ROD) IN A 11 YEAR OLD CHILD.

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ABSTRACT

INTRODUCTION

Morbidity and mortality of penetrating neck trauma reported as 5-10% and 3-6% respectively. Massive haemorrhage has been main cause of death. Selective management is a shift from traditional mandatory exploration which is based on physical examination and selective diagnostic studies. We hereby present a case of penetrating zone II neck injury by an iron rod in a 11 year old boy due to accidental fall in under construction building.

AIM AND OBJECTIVE

To highlight the rarity of the case and emphasize on the complex nature of injury.

METHODOLOGY

11 year old male child was referred to our medical college hospital with history of fall over iron rod in an under construction building. He was vitally stable on examination and around 45 cms iron rod was seen penetrating through anterior tongue and floor of mouth extending through the left submandibular gland externally. There was no bleeding or hematoma. Patient was subjected to Surgery and rod was removed under GA. There was no post operative complications. On follow up upto 6 months patient was doing fine.

CONCLUSION

Penetrating neck injury is rare and anatomical knowledge of neck is of utmost importance so as to prevent undue complications and aggressive management. Conventional packing of sinus tract is no longer recommended. Good clinical diagnosis can rule out any sign of vascular injury

and in that case angiography and CT could be avoided without any major risk.

INTRODUCTION

Morbidity and mortality of penetrating neck trauma reported as 5-10% and 3-6% respectively¹. Massive haemorrhage has been main cause of death. Selective management is a shift from traditional mandatory exploration. Selective surgical management is based on physical examination and selective diagnostic studies. Neck is divided into three zone; zone I (from clavicle or sternum to cricoid cartilage include thoracic inlet); zone II between cricoids cartilage to angle of mandible; zone III angle of mandible to skull base. We hereby present a case of penetrating zone II neck injury by an iron rod in a 11 year old boy due to accidental fall in under construction building.

AIM AND OBJECTIVE

To highlight the rarity of the case and emphasize on the complex nature of injury

METHODOLOGY

11 year old patient was referred to our medical college hospital with history of fall over iron rod in an under construction building.

On examination patient was conscious oriented and his vitals were stable, Locally around 45 cms long iron rod was seen penetrating through the anterior 2/3 rd tongue in midline through the floor of mouth to the submandibular space, lingual neurovascular bundle was preserved and there was no active bleed either from oral cavity or from neck.



Our patient was stable and there was no active bleeding or palpable swelling (suggestive of hematoma) hence we didn't subjected the patient to any additional investigation.

Surgical procedure; After RAT test for Covid, patient was intubated intranasally and Under GA. Mouth gag and cheek retractor was applied and wound was examined under anaesthesia. Rod was seen passing through tongue musculature into the floor of mouth to the submandibular space into the neck, well away from mandible. We removed the rod through push and pull technique, and there was no vascular injury examined thereafter. After giving adequate betadine wash. Wound was closed in layers. No drain was put and we didn't do any packing for the tract.

Post operatively patient was admitted for a week started on IV antibiotics and was on Ryles Tube feed for 7days. Intraoral clear fluid was started on day 6th. There was no deficit in speech articulation. Patient recovered well within a week and was discharged when ryles tub was removed on discharge Patient was doing well after 6 months of follow up.

CONCLUSION

Penetrating neck injury is rare and anatomical knowledge is of utmost importance so as to prevent undue complications and aggressive management. Conventional packing of sinus tract is no longer recommended. Good clinical diagnosis can rule out any sign of vascular injury in that case angiography and CT could be avoided without any major risk

REVIEW OF LITERAURE

Aich et al⁶ 2013 published case series of 3 cases case 1 was of 18 year female iron rod was seen penetrating through the left lateral margin tongue, soft palate left parotid and fracture of mandible was present case 2 was 35 male where bamboo stick was seen penetrating through the floor of mouth with injury of left submandibular gland. case 3 was of 27 male where tufted iron rod was passing through submental region, nasal vestibule, left submandibular and mandible. They didn't undergo any radiological investigation as the patients were stable. Apart from first case which presented with facial palsy preoperatively none of these had any residual deficit.

Wang et al⁷ 2018 presented a case report of a 55 year old building workers with injury in Zone III, they performed neck exploration and tracheostomy and reported no residual deficit at 12 months of follow up.

Bazzout⁸ et al 2021 reported a case of 35 male with accidental fall and penetrating iron rod injury on right side of neck and on exploration vascular

structure were preserved .No residual deficit was reported at 4 month follow up .

DISCUSSION

Neck; a complex anatomical region with numerous vital structure covered by fascia and tough musculature. Penetrating neck injuries are dangerous owing to proximity of these structure. Zone III injury are more dangerous to zone II. Our case presented with Zone II neck injury and we did not subjected the patient to additional radiological intervention as there was no sign of vascular injury .Nunez et al⁹ reported that for Zone II injury there does not exist difference between clinical examination and CT Angiography . Sekharan et al¹⁰ in their study of 145 patient reported that physical sign of vascular injury like pulse deficit ,active bleeding ,bruit ,expanding hematoma are nearly equivalent accuracy to detect vessel injury with missed rate of 0.7%.

CONCLUSION

Penetrating neck injury is rare and anatomical knowledge is of utmost importance so as to prevent undue complications and aggressive management .Conventional packing of sinus tract is no longer recommended .Good clinical diagnosis can rule out any sign of vascular injury in that case angiography and CT could be avoided without any major risk .

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