

FOREIGN BODY REMOVAL VIA TRACHEOSTOMY. AN UNCOMMON OCCURRENCE

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ABSTRACT

Foreign body airway in a trauma patient is a relatively common occurrence however rigid and flexible bronchoscopy remains the modality of choice for removal of foreign bodies. We present a case of foreign body air way following an RTA which was unsuccessfully removed via a non conventional technique.

Keywords: Bronchoscopy, Foreign body, Trauma, Tracheostomy.

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INTRODUCTION

Foreign body removal from the air way is a challenging task as it requires the presence of a skilled anesthetist and a competent otorhinolaryngologist¹, this task becomes even more challenging when it involves a trauma victim with cervical spine fracture, maxillofacial trauma and emergency tracheostomy already performed. We report such a case of removal of a large denture impacted in the right bronchus of an adult male who suffered maxillofacial trauma and cervical spine fracture following an RTA.

CASE REPORT

Our patient, a 35 year old male was brought to Emergency Dept of Level 1 Trauma Centre of our hospital in the early hours of the morning following an RTA with a lorry. On arrival in emergency the patient had obvious facial disfigurement with flattening of facial features and mobile lower jaw. There was rapidly developing facial swelling and edema with secondary post nasal and oral bleed. Emergency intubation was attempted but was unsuccessful. Resultantly emergency tracheostomy was performed by the resident Otorhinolaryngologist and airway secured. Detailed examination and radiological investigations revealed comminuted fracture of Maxilla, Zygoma of Rt Side, fracture mandible body and angle on the left side,

lacerated tongue and compressed fracture of C7 and T1. In addition he also had mild lung contusion right side and liver contusion as well. The X-Rays also revealed a large denture impacted in the right main bronchus. It was most likely displaced as a result of the initial trauma. With tracheostomy already performed and upper airway too edematous to allow an intubation as well as the associated cervical spine fracture, the only possible route of extraction of the denture was via the tracheostomy. Resultantly the trachea was mobilized to a distance of 1.5 cm all around to allow the insertion of a rigid bronchoscope size 6 while keeping the patient on manual ventilation and foreign body removed with difficulty using grasping forceps. The removal was uneventful except for minor bleed during removal and he underwent repair of maxillofacial and cervical spine fracture in the same sitting. He remained on ventilator support over the next 7 days and was gradually weaned off by the 13th day of intubation. He had post trauma weakness of left half of his body but remained in good health otherwise. Tracheostomy wound was closed on 21st day of arrival in hospital and he was discharged with advice to follow up in rehabilitation department on 29th day of his arrival.

DISCUSSION

Rigid bronchoscopy is one of the best method of removal of foreign body airway as it ensures patency of the airways during removal, prevents the foreign body from damaging the mucosa as the foreign body is usually pulled into

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the lumen of the bronchoscope and ensures adequate ventilation during the procedure^{1,2}. In our patient rigid bronchoscopy became technically challenging as it was performed on an already tracheotomized patient with cervical spine injury whose neck could not be ideally positioned for foreign body removal via a rigid bronchoscope.

Very few case report of foreign body removal via this approach in patients was found in our region and none in a patient with cervical spine injury. Fraga JC, Pires AF et al and Zur KB, Litman RS documented removal of foreign body via tracheotomy using a fiberoptic bronchoscope in two trauma patients but in both cases it was because endotracheal tube was too small to allow foreign body removal^{3,6} in addition the cases had serious anesthesia complications. Our case was unique in that aspect that foreign body was discovered after emergency tracheostomy and the patient also suffered cervical spine injury which made the removal technically more challenging and the removal without significant anesthesia complication makes it unique. Nazir OM, Kumarasamy S and Ahmed M, Ahmed S also documented removal of foreign body via tracheostomy but it was done for children aged 3-9 years and the foreign bodies were plastic whistle and nut^{4,5}.

Tracheotomy removal of foreign body is rare but the surest method of removal of foreign body in children and adults in cases of small airways with larger, impacted foreign bodies or in cases of abnormally placed foreign bodies where endoscopic removal intraorally is unsuccessful or impossible⁶⁻⁸.

A review of literature did not reveal any significant number of cases of foreign body removal in adult male suffering from cervical spine injury, via tracheostomy, in Pakistan, making it a unique scenario in our region.

CONCLUSION

We would like to conclude that removal of foreign body via tracheostomy using rigid bronchoscope in selected cases is a viable and safe approach but requires good anesthesia support and experienced surgical team.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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