



# Tracheostomy Tube as Foreign Body in Right Main Bronchus: A Case Report

Vaishali Waindeskar<sup>1</sup> · Sanjay Kumar<sup>1</sup> · Deepti Agrawal<sup>1</sup>

Received: 17 January 2020 / Accepted: 7 February 2020 / Published online: 15 February 2020  
© Association of Otolaryngologists of India 2020

**Abstract** Tracheostomy is a commonly performed procedure to secure airway in patients who need prolonged airway support (Marchese et al. in *Respir Med* 104(5):749–753, 2010). It is relatively safe procedure but associated with few early and late complications (Fernandez-Bussy et al. in *J Bronchol Interv Pulmonol* 22(4):357–364, 2015). Metallic tracheostomy tubes were used in patients in the past. Those tubes were associated with fracture and dislodgement due to corrosive injury. Few case reports have been published in the past (Lynrah et al. in *Int J Pediatr Otorhinolaryngol* 76(11):1691–1695, 2012; Agarwal and Agarwal in *Indian J Chest Dis Allied Sci* 53(2):111, 2011). PVC tubes are less prone for fracture, but wear and tear associated with prolonged use can lead to break in the tube and dislodgement. We successfully diagnosed and managed such a case of broken PVC Tracheostomy tube in right main bronchus and share our experiences.

**Keywords** Tracheotomy tube · Foreign body · Airway

## Case Report

A 35 year old male with history of laryngeal trauma in 2011 with bilateral vocal cord palsy with PVC Tracheostomy tube in situ was presented to our emergency department with the complaint of breathing difficulty after cleaning of tube by his caretaker at home. His Tracheostomy tube was not changed since 2011.

On examination patient was tachypnic and maintaining Spo<sub>2</sub> of 94% on supplemental oxygen. His hemodynamic parameters were stable. Chest was clear on auscultation.

Chest X-ray was ordered which showed broken PVC tube in right bronchus (Fig. 1).

ENT surgeon planned to remove the tracheostomy under bronchoscopic guidance. Patient was shifted to OT for the procedure. We planned to intubate the patient while maintaining spontaneous ventilation with fibre optic guidance. There was severe tracheal stenosis above tracheostomy site and hence the procedure was abandoned.

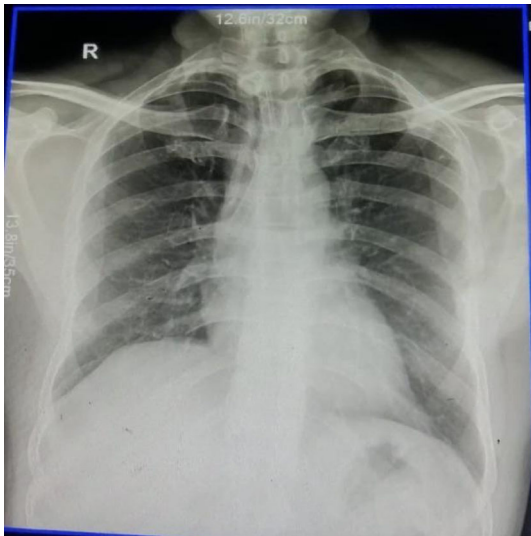
After taking proper written informed consent from patient and his relative, patient was shifted to OT. After attaching all the standard monitors we premeditates the patient with standard doses as per our protocol. Under total intravenous anesthesia patients airway was planned to be secured using fibre optic bronchoscope. Patient had developed subglottic stenosis hence intubation was abandoned. Surgeons decided to extend the incision of tracheostomy site. We oxygenated the patient from the stoma of tracheostomy to prevent hypoxemia. Surgeon then introduced bronchoscope and removed the foreign body (shaft of tube as seen in Fig. 2). Patients airway was then secured with cuffed tracheostomy tube and hemostasis was achieved. As we examined the foreign body, it comes out to be the whole length of tracheostomy tube. Postoperative course of the patient remain uneventful.

✉ Vaishali Waindeskar  
vaishaliwaind@gmail.com

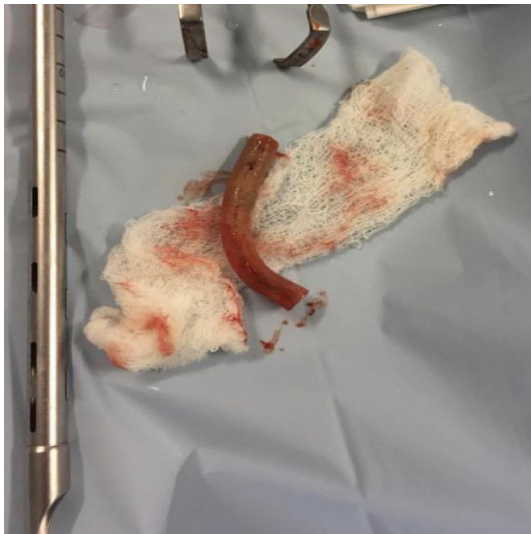
Sanjay Kumar  
drsanjayaiims.2012@gmail.com

Deepti Agrawal  
deeptiagrwal@gmail.com

<sup>1</sup> Department of Anesthesiology and Critical Care, All India Institute of Medical Sciences, Bhopal, MP, India



**Fig. 1** Chest radiograph (postero-anterior view) showing foreign body in right main bronchus and broken tracheostomy tube



**Fig. 2** Photograph of broken tracheostomy tube

## Discussion

Incidence of accidental fracture of PVC tracheostomy tube are rare phenomenon. But if occurs may be the result of poor counselling from the treating doctor or ignorance

from patient side. Hence to avoid such incidences we advocate a) Proper counselling of patient. b) Tracheostomy tube care should be taught to patient and their relatives before discharge from the hospital. c) Ask patient for regular visit to hospital for tracheostomy tube change.

**Funding** None.

**Compliance with Ethical Standards**

**Conflict of interest** None.

**Research Involving Human Participants and/or Animals** Not applicable as this is a case report.

**Informed Consent** Informed consent had been obtained for this case report.

## References

1. Marchese S, Corrado A, Scala R, Corrao S, Ambrosino N, Intensive Care Study Group, Italian Association of Hospital Pulmonologists (AIPO) (2010) Tracheostomy in patients with long-term mechanical ventilation: a survey. *Respir Med* 104(5):749–753
2. Fernandez-Bussy S, Mahajan B, Folch E, Caviades I, Guerrero J, Majid A (2015) Tracheostomy tube placement. *J Bronchol Interv Pulmonol* 22(4):357–364
3. Lynrah ZA, Goyal S, Goyal A, Lyngdoh NM, Shunyu NB, Baruah B, Dass R, Yunus M, Bhattacharyya P (2012) Fractured tracheostomy tube as foreign body bronchus: our experience with three cases. *Int J Pediatr Otorhinolaryngol* 76(11):1691–1695
4. Agarwal N, Agarwal R (2011) Fractured tracheostomy tube migrating into the tracheobronchial tree: a rare complication. *Indian J Chest Dis Allied Sci* 53(2):111

**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.