

CASE REPORT

A RARE CASE OF FOREIGN BODY (DETACHED PORTEX TRACHEOSTOMY TUBE) IN THE BRONCHUS: CASE REPORT

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ABSTRACT: Tracheostomy is a common airway procedure for life support. Fractured/detached and hence aspiration of a tracheostomy tube in the tracheobronchial tree is a rare late complication which can be life threatening sometimes. Published reports of a fractured metallic tracheostomy tube presenting as a foreign body in the tracheobronchial tree are rare and detached portex tracheostomy tube are even rarer. Hereby we are reporting a rare case of detached part of portex tracheostomy tube presenting as a foreign body in the right bronchus. Therapeutic rigid bronchoscopic removal is the mainstay of treatment. A periodic review of the techniques of tracheostomy care including timely checkups for signs of wear and tear can possibly eliminate such avoidable late complications.

KEYWORDS: Portex tracheostomy tube, tracheostomy tube complications, foreign body bronchus, tracheostomy care.

INTRODUCTION: Tracheostomy is a common airway procedure for life support. This procedure is safe, although occasional early and late complications are known to occur. Fracture and hence aspiration of a tracheostomy tube in the tracheobronchial tree is rare late complication which can be life threatening. Published reports of fractured Tracheostomy tube presenting as foreign body in tracheobronchial tree are few.^{1,2,3}

CASE REPORT: A 41/2 year old female patient presented to our casualty GMCH Aurangabad, two hours after the missing inner tube of the PORTEX Tracheostomy tube (no.3.5 uncuffed) having only outer neck plate with signs of respiratory distress and stridor. Her medical reports showed, she had undergone tracheostomy procedure outside for which she was admitted for meningitis with right side hemiplegia. On examination her vitals were normal. Neck examination showed stomal stenosis. On auscultation, chest revealed decreased breath sounds bilaterally. A subsequent NCCT Neck was done clearly outlined the part of that missing portex tracheostomy inner tube, in trachea at level of T2 and extending into right main bronchus at T5 level (Fig. 1).

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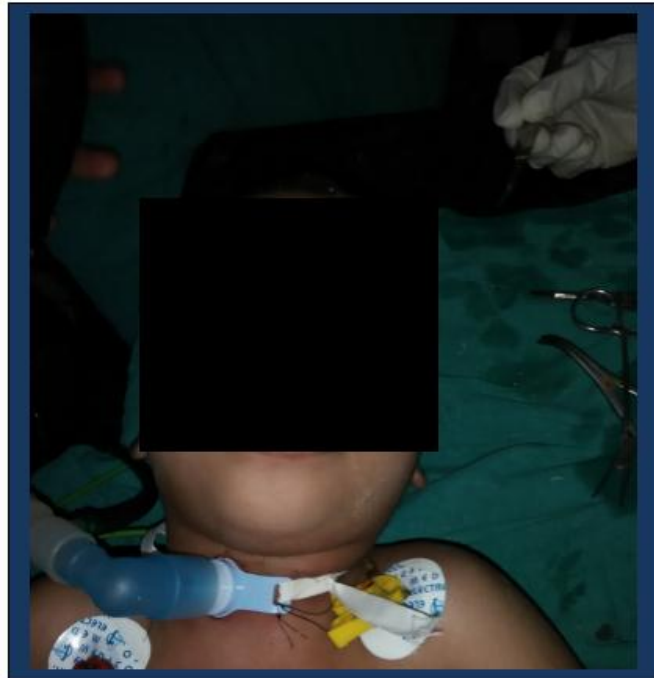
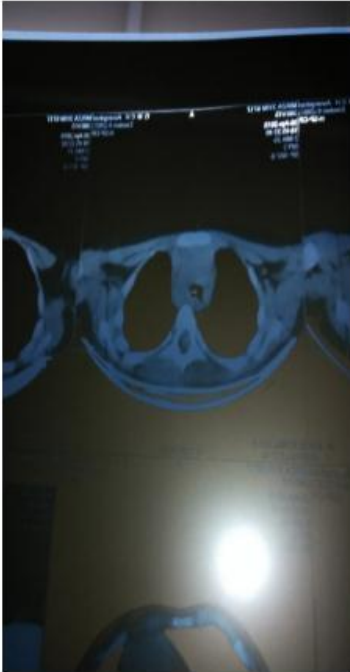


Fig. 1

She was immediately shifted to the operating room for a rigid bronchoscopic removal under general anesthesia. Since the patient upper airway was already compromised by previous pathology and the stomal stenosis, general anesthesia was given and the procedure was started under local infiltration around stomal opening (2% xylocaine with adrenaline –premixed) followed by 2cc of 4% xylocaine instillation into the trachea. Tracheostomy stoma was widened to facilitate rigid bronchoscopy. It was noted that the patient was relieved of stridor on widening the stoma. The portex inner tube was retrieved from the right main bronchus through tracheostomy stoma with the aid of a long foreign body bronchoscopy forceps. Detachment at the junction between the inner tube and the neck plate was found (Fig. 2 and 3).

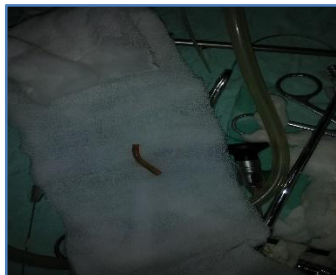


Fig.2: Showing detached inner tube of the portex tracheostomy tube from its neck plate.



Fig. 3: comparison of detached & normal portex tracheostomy tube after its removal from the bronchus.

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A Portexuncuffed tube no 4.5 was used to replace the detached portex tube. Patient was discharged after her status was stable with an advice on proper maintenance of tracheostomy tube.

DISCUSSION: Various objects have been reported as overlooked foreign bodies in tracheobronchial tree. The first case of report of a metallic tracheostomy tube was in 1960 by Bassoe and Boe,¹ since then, this complication has been published in the literature periodically. The largest series of fractured tracheostomy tubes reported to date by Gupta in 1987² was of nine cases reported over a period of about 8 years. Modern metallic tracheostomy tubes are made from stainless steel, which are supposed to be less corrosive and less likely to fracture. Despite this a Majority of the cases of fractured tubes reported in literature have been metallic.⁴ The most common reported fracture site is at the junction between the tube and the neck plate.^{3,5}

Prolonged usage leading to the wear and tear of the tubes has been proposed as the major risk factor for tracheostomy tube fracture. The most common dislodged site reported was the trachea and the right main bronchus.⁵ The prolonged stay of a foreign body in the bronchial tree can lead to irreversible pulmonary changes⁶ due to mechanical pressure effects, chemical reactions and at times can lead to even malignant transformation.

In most cases, the diagnosis is obvious in a chest radiograph.² Computed tomography Thorax with bronchoscopy is helpful in ascertaining the exact position of the fractured/detached fragment in relation to the tracheobronchial tree in longstanding cases especially when chest disease is suspected.⁷

Foreign body aspiration is a serious medical emergency demanding timely recognition and prompt action. Therapeutic rigid bronchoscopy is the mainstay of the treatment⁸, since a larger foreign body such as broken portex tracheostomy tube may not be retrievable with a flexible bronchoscope. In cases where in the fractured fragment is lying just below the tracheostomy stoma removal under direct vision is possible.

A relieving incision at the site of narrow tracheostomy opening may be required in some instance. In our case, since stomal stenosis was already present the preferred method of extraction of foreign body is by recannulation of stoma and retrieval of foreign body through the same.

CONCLUSION: A periodic review of the techniques of the tracheostomy care⁸ including timely checkups for signs of wear and tear can possibly eliminate such avoidable late complications.⁷

REFERENCES:

1. Bassoe HH, Boe J. Broken tracheotomy tube as a foreign body. *Lancet*. 1960; 1:1006–7. [PubMed].
2. Gupta SC. Fractured tracheostomy tubes in the tracheobronchial tree: A report of nine cases. *J Laryngol Otol*. 1987; 101: 861–7. [PubMed].
3. Gupta SC, Ahluwalia H. Fractured tracheostomy tube: An overlooked foreign body. *J Laryngol Otol*. 1996; 110: 1069–71. [PubMed]

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4. Piromchai P, Lertchanaruengrit P, Vatanasapt P, Ratanaanekchai T, Thanaviratananich S. Fractured metallic tracheostomy tube in a child: A case report and review of the literature. *J Med Case Reports*. 2010; 4: 234. [PMC free article][PubMed]
5. Alqudehy ZA, Alnufaily YK. Fractured tracheostomy tube in the tracheobronchial tree of a child: Case report and literature review. *J Otolaryngol Head Neck Surg*. 2010; 39: E70–3. [PubMed]
6. Hagibour A, Khan ZH. Fracture and aspiration of metallic tracheostomy tube. *Saudi Med J*. 2007; 28: 468. [PubMed]
7. Arvind Krishnamurthy and R Vijayalakshmi Broken tracheostomy tube: A fractured mandate *J Emerg Trauma Shock*. 2012 Jan-Mar; 5(1): 97–99. doi: 10.4103/0974-2700.93098.
8. White AC, Kher S, O'Connor HH. When to change a tracheostomy tube. *Respir Care*. 2010; 55: 1069–75. [PubMed]

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