

Clinical Image

Aspiration of a Fractured Tracheostomy Tube in a Patient with Pre-existing Airway Compromise

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A 53-year-old asymptomatic male presented with fracture and aspiration of his polyvinyl chloride (portex) tracheostomy tube, which was diagnosed on X-ray (Figure 1) and CT scan (Figure 2).

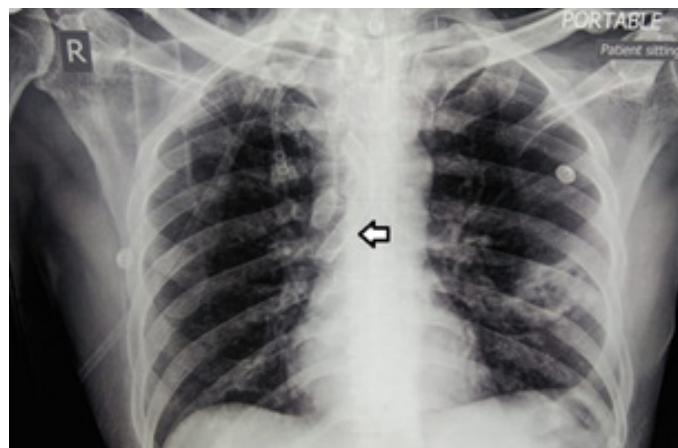


Figure 1: Chest X-ray (postero-anterior view) showing fragment of tracheostomy tube in right main bronchus.



Figure 2: CT scan of chest: Coronal view (A) and Sagittal view (B) showing fragment of tracheostomy tube in right main bronchus.

A therapeutic transoral bronchoscopy was not possible as the patient was suffering from glottic carcinoma. The foreign body was removed under sedation using a rigid bronchoscope which was introduced through the tracheostomy stoma. The 8 cm long fractured piece of tracheostomy tube was removed in toto (Figure 3) without any complications and the patient had an uneventful postoperative recovery.



Figure 3: Retrieved fractured fragment of tracheostomy tube (8 cm long) which was found to be broken at the junction of shaft and neck plate.

A foreign body lodged in the airway requires emergent attention due to the inherent risk of airway compromise which could be potentially life threatening. Thus, it would be prudent to perform close checks on patients with a tracheostomy tube on follow-up to identify pending failure and also change the tube every 8 weeks. In incidentally diagnosed asymptomatic cases of foreign body aspiration, its prolonged stay in the bronchial tree can lead to irreversible pulmonary changes due to mechanical pressure

effects, granuloma formation, chemical reactions and at times can even lead to malignant transformation, which would increase the risk of bleeding during removal, thus, warranting extra caution[1]. Anesthetic management during the removal of fractured tracheostomy tube is challenging. Most of these patients will be having a compromised airway anatomy because of the primary disease process and thus, fracture and dislodgment of the tube may lead to life-threatening airway obstruction. In the present case scenario, the patient already had a glottic carcinoma with resulting airway compromise. Published reports of a fractured tracheostomy tube presenting as a foreign body in the tracheobronchial tree are few[2-5] and those managed by a bronchoscopy performed via the tracheostomy stoma, in a patient of pre-existing airway compromise, are even rarer.

References

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