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Bronchus Suis

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A 40-year-old gentleman with multiple comorbid presented to the emergency department with noisy breathing. Patient had prior history of intubation for respiratory distress for one-week. According to patient, noisy breathing was noticed since discharge. Upon examination, biphasic stridor was audible, however patient was not tachypnoeic or tachycardic. Flexible nasopharyngolaryngoscopy done revealed normal supraglottic structures with mobile vocal cords with stenosis noted beyond subglottic region. Tracheostomy was done under local anaesthesia for laryngotracheal stenosis in airway distress. Flexible bronchoscopy via tracheostomy tube revealed blind-end opening over right side of trachea above carina [Figure 1].

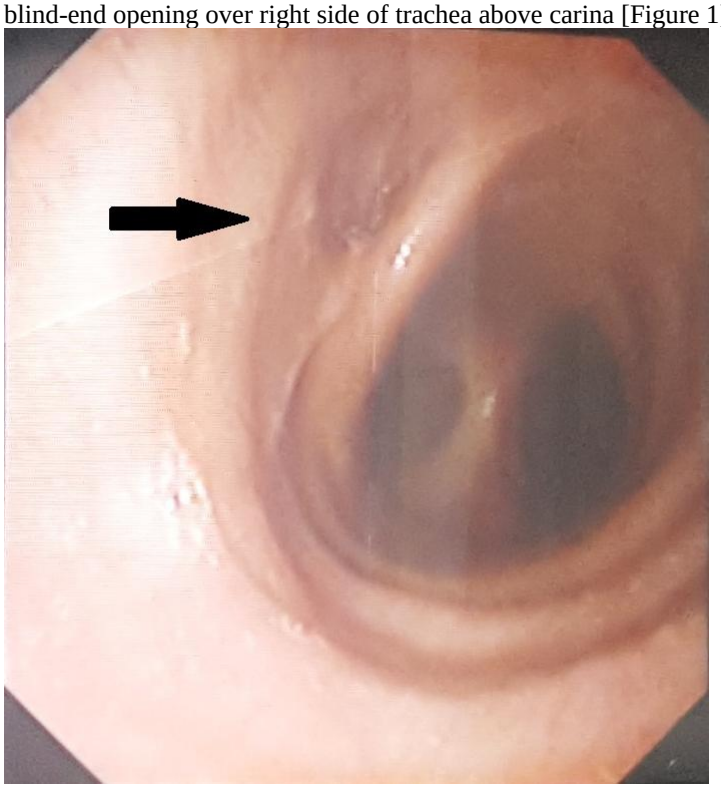

Figure 1: Flexible bronchoscopy via tracheostomy tube revealed blind-end opening over right side of trachea above carina.

Question

What is your diagnosis?

A. Tracheal bronchus

B. Tracheomalacia

C. Tracheal stenosis

D. Granulation tissue

Answer

Tracheal bronchus

Discussion

High resolution computed tomography of larynx showed an outpouching lesion arising at right lateral wall of trachea at level of T4 [Figure 2]. Tracheomalacia will be noted as weakening or collapse or malacic of the tracheal wall which can be noted during flexible bronchoscopy. Tracheal stenosis will appear as narrowing of the laryngotracheal lumen; whereas granulation tissue present along the laryngotracheal wall will also lead to narrowing of the airway lumen which can be noted during bronchoscopy. From the flexible bronchoscopy, no narrowing or weakening or granulation tissue was noted along the tracheal wall.

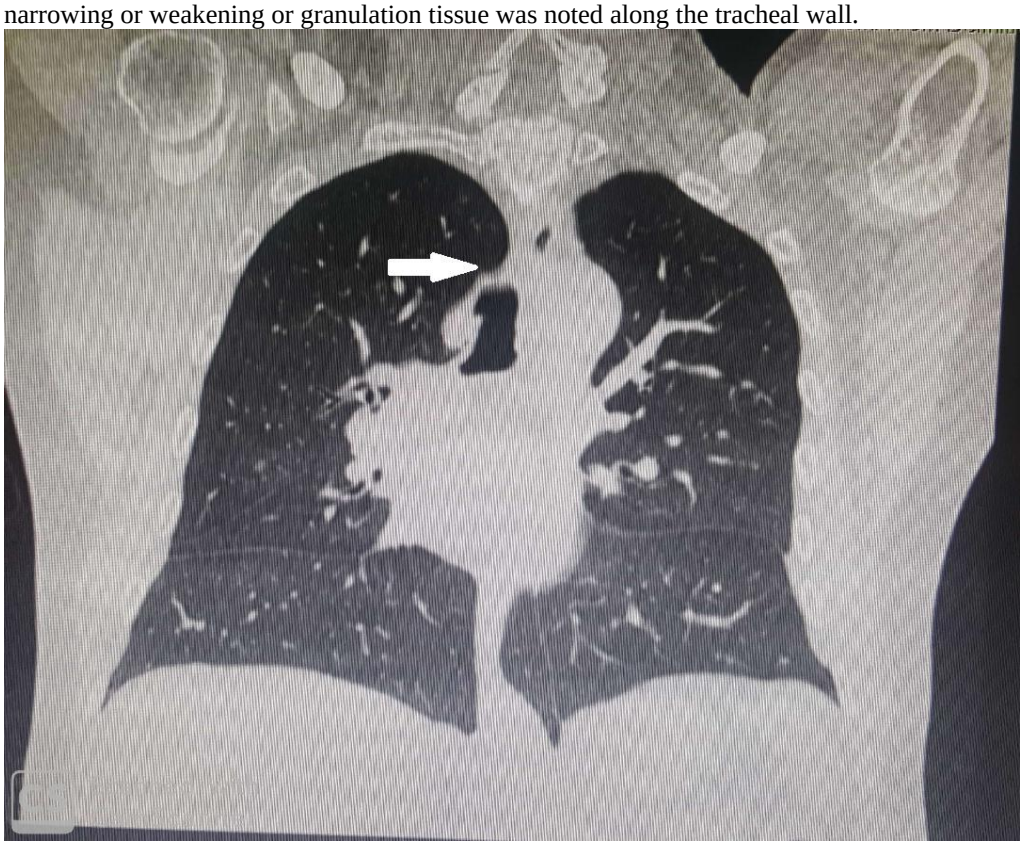

Figure 2: High resolution computed tomography of larynx showed an outpouching lesion arising at right lateral wall of trachea at level of T4.

Tracheal bronchus or bronchus suis is a congenital aberrant bronchus commonly emerging from right tracheal wall above carina. In general population, tracheal bronchus is reported in 0.1 to 2%.[1] It occurs as a result of additional tracheal outpouching which occurs in early embryonic life. This rare entity is often discovered incidentally during bronchoscopy either rigid or flexible and imaging.[2] It is noteworthy that association with tracheal stenosis and Down's syndrome has been reported. Additionally, right-sided predilection has been reported.[3] Most patients remain asymptomatic as in our case or in some cases may present with recurrent chest infections following retained secretion and even respiratory distress. In some cases, unintentional intubation of tracheal bronchus may lead to atelectasis, post-operative pneumonia, respiratory failure and even pneumothorax.[3]

Patients can be managed conservatively in the absence of any clinical symptoms. It is noteworthy that knowledge of this rare entity is vital as, if this anomaly is occluded during intubation, collapse of lobe, pneumothorax and inadequate ventilation may follow. We would like to highlight that tracheal bronchus ought to be considered as a differential diagnosis in all patients especially children with recurrent upper lobe collapse.

Disclosure

This study was not funded. This article does not contain any studies with human participants or animals performed by any of the authors Informed consent was obtained from the patient to include his photograph for education purpose and publication

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