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Case report

Hemoptysis in a previously healthy elderly patient with an unrecognized tracheal bronchus: A case report

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ABSTRACT

A 83-year-old healthy female with no past medical history presented with persistent hemoptysis and respiratory failure. She was found to have a tracheal bronchus on bronchoscopy. Patient underwent pulmonary lavage and sterile irrigation. Patient was stable, but developed excessive hemoptysis which prompted a repeat, emergent, bronchoscopy was performed to advance the ET tube to isolate the left lung from the bleeding right lung. Despite the effort taken, the patient became pulseless from the hypoxia caused by blood spillover into the entire tracheobronchial field. ACLS protocol initiated without successful ROSC. Tracheal bronchus is uncommon but when present patients usually develop recurrent pulmonary symptoms at a younger age which require extensive workup which can lead to discovery of pulmonary anomalies. In our patient, she has no recurrent pulmonary symptoms as a child nor as an adult. We suspect the reason to this is the normal size diameter of the bronchus that connects the accessary lobe to the trachea. There are a few Medical conditions that may present with hemoptysis. When there is persistent, new onset hemoptysis in an otherwise healthy individual there should be no hesitation in performing the necessary procedural studies to reach a diagnosis.

1. Introduction

Tracheal bronchus is a rare congenital bronchial anomaly with incidence of 0.1–5%. It often goes unrecognized and is usually an incidental finding during a bronchoscopy. Here we describe a rare finding of tracheal bronchus in an 83 year-old female that has never been diagnosed nor had recurrent pulmonary symptoms throughout her life.

2. Case report

A 83-year-old female with no significant past medical history was found at home by family members covered with blood mostly around her mouth. Upon EMS arrival, her oxygen saturation was 70% with tachycardia and tachypnea and was immediately intubated. On physical examination, crepitations on auscultation of bilateral lung fields with wheezing over right chest. Chest x-ray revealed diffuse bilateral pulmonary opacities, most predominantly involving the right upper lobe. Pulmonary CT angiogram with Pulmonary Embolism (P.E.) protocol showed multifocal opacities most prominent in the right upper lobe which may represent multifocal consolidation and no evidence of pulmonary embolism. The CT obtained was to rule out P.E. and did not emphasize on the blood supply to the right upper lobe. However, the CT imaging does not suggest a bronchial blood supply. The blood supply to the right upper lobe is thought to be pulmonary in origin. Immediate bronchoscopy revealed evidence of clotted blood in the trachea with an accessory lobe arising directly from the trachea, 1 cm above the carina, which was the main source of bleeding. Moderate right lower lobe purulent secretions with no endobronchial lesions. Saline irrigation and aspiration with total clearance of all the secretions and clotted blood from the airways. No active bleeding was noted after clearing of secretion. Several hours after bronchoscopy, there was bright red blood in the ET tube w/blood clots. Another emergent bronchoscopy was performed to reposition the ET tube into the left main bronchus to isolate the right side and tracheal bronchus. There was evidence of fresh blood in the tracheobronchial tree in all segments with possible spillover. Shortly after, patient became pulseless and ACLS protocol was initiated without successful ROSC.

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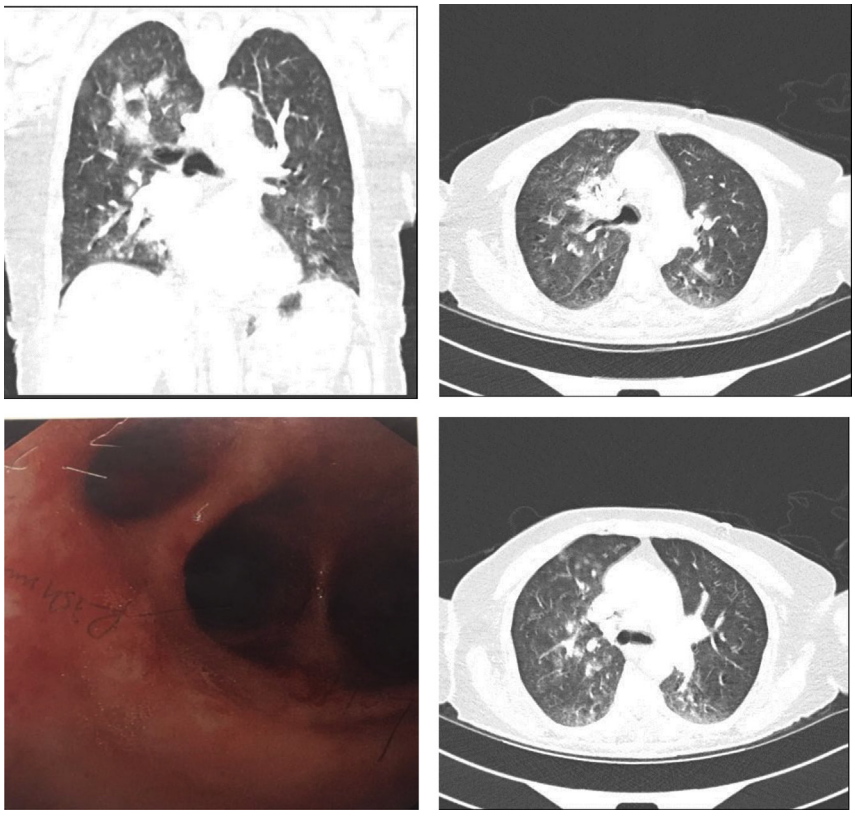
3. Discussion

Sandifort first described tracheal bronchus in 1785. Its incidence is 0.1–5% and in most cases, it is incidentally found during bronchoscopy or CT [1,2]. Tracheal bronchus can arise from either left or right main stem bronchus with the majority of cases arising from the right wall of the trachea [3]. Majority of the patients with tracheal bronchus are usually in the pediatric population with symptoms of chronic lung infections, bronchiectasis, or chronic lung disease [4]. In this case, an accessory lobe with a tracheal bronchus about 1 cm above the carina was revealed on bronchoscopy. It was surprising that the patient did not have any previous symptoms that would suggest any pulmonary anomalies. The reason suspected for patient remaining asymptomatic is the normal size diameter of the bronchus from lobe to trachea. In asymptomatic patients, it usually does not require any medical interventions. However, in patients with recurrent pulmonary symptoms, a resection of the lobe is usually recommended.

Another interesting point to this case was that the patient had multiple episodes of hemoptysis which had ultimately led to her death. It is also very rare for a tracheal bronchus to have a significant amount of hemoptysis. Given patient was previously healthy with no respiratory symptoms, it was very difficult for physicians to assess the cause of hemoptysis. The first bronchoscopy did not reveal any active bleeding after initial irrigation, however, patient was bleeding from an unidentified region in the tracheal bronchus which eventually caused a spillover to all tracheobronchial segments that caused hypoxia leading to cardiac arrest. Retrospective analysis of this patient, a Fogarty catheter occlusion of the bleeding site and surgical resection of the lobe would have been beneficial to persons with tracheal bronchus. Tracheal bronchus is a difficult to diagnose disease and can have many presentations. When there is suspicion and diagnosis is uncertain, there should be no hesitancy in performing a bronchoscopy to aid in diagnosis. Tracheal bronchus should also be considered as a potential cause of sudden persistent hemoptysis.



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