INCIDENTAL FINDING OF TRACHEAL BRONCHUS IN AN INTUBATED PATIENT PRESENTING WITH RIGHT LUNG ATELECTASIS

KARENNE SOMERA MD*

INTRODUCTION: A long-standing atelectasis in an intubated patient with proper endotracheal positioning and prompt medical management warrants careful investigation. An under diagnosed congenital anomaly may be missed in these cases.

CASE PRESENTATION: This is the case of a 1-year old male with Congenital Heart Disease, Tetralogy of Fallot, who had no pulmonary problems prior to the surgical correction of the cardiac lesion. The operation was well-tolerated by the patient. However, during the 1st post-operative day, the patient developed right lung atelectasis which remained unresolved despite aggressive pulmonary regimen. Bronchoscopy was done on the tenth day post-intubation which revealed fish-mouth shaped right main bronchus which may be a manifestation of a possible compression of an adjacent structure from the outside. Because of the persistence of the atelectasis and the bronchoscopic finding of a possible external compression of the right main bronchus, chest CT scan was done which revealed tracheal bronchus.

DISCUSSION: Tracheal bronchus is an abnormal accessory bronchus arising usually from the right lateral wall of the trachea. It is usually of no clinical significance, however may present as an aggravating factor in the development of post-operative complications.

This congenital anomaly is usually discovered as an incidental finding, during a radiological investigation or bronchoscopy. In the said patient, the tracheal bronchus was not detected in the serial chest radiographs taken.

In a plain chest radiograph, the tracheal bronchus can easily be missed, as in the study of Zheng et.al. Out of the 396 patients, tracheal bronchus was detected in 1.8% of the patients who underwent bronchoscopy. The lesion was noted at the right side of the trachea in all the 7 patients. All these 7 patients’ chest radiographs did not manifest any sign of tracheal bronchus.

As in the case of our patient, the chest radiograph reading did not reveal any sign of pig bronchus. Furthermore, during the bronchoscopy done while the patient was intubated, the tracheal bronchus was also not appreciated, probably due to the positioning of the endotracheal tube obscuring the lumen of the accessory bronchus.

Several of the studies conducted demonstrated the diagnosis of the bronchial anomaly through the use of chest CT scan. The use of multiplanar reconstruction, three-dimensional reconstruction and three-dimensional virtual bronchoscopy are very helpful in the diagnosis of this anomaly.

CONCLUSIONS: Tracheal bronchus is a relatively under diagnosed condition in patients presenting with chronic pulmonary signs and symptoms. This congenital anomaly should be considered as a differential diagnosis for intubated patients presenting with long-standing atelectasis. A careful review of the plain radiograph, bronchoscopic findings, and chest CT scan results should be done in such cases.


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