

Rare Cause of Massive Hemoptysis, Coronary-bronchial Artery Fistula: Case Report

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Coronary-bronchial artery fistula(CBF) is an extremely rare congenital abnormality of the coronary artery. While most patients with CBF do not show any symptoms, some may experience other symptoms. In this report, we present a case of a patient with a coronary-bronchial artery fistula who had bronchiectasis and a history of massive hemoptysis. A 60-year-old male with a history of bronchiectasis and pertussis presented to the emergency department one hour ago with a sudden change in mental status. He experienced half a cup of hemoptysis several days before. He developed chest discomfort and respiratory distress, and Initial ABGA showed hypercapnic respiratory failure, leading to intubation. Chest CT (Figure 1) revealed left lower lobe bronchiectasis and, a tortuous bronchial artery (Figure 1, blue arrow) and a suspicion of CBF (Figure 1, red arrow) were observed. Given the possibility of embolic myocardial infarction (MI) from bronchial artery embolization (BAE), a common treatment for hemoptysis, BAE was considered inappropriate in this case. Further evaluation was carried out through coronary CT angiography (Figure 2) and Coronary angiogram (Figure 3-1), showing tortuous and anomalous coronary-bronchial artery fistula. Following embolization (Figure 3-2) during coronary angiography, the patient was discharged without any complications. Life-threatening massive hemoptysis often leads to performing routine chest CT and considering BAE as the standard treatment. However, as seen in this case, BAE may not be suitable for certain individuals. Therefore, it is crucial to identify the bleeding focus thoroughly through CT (and possibly angiography) before deciding on BAE or other treatment options. In this patient, after coronary embolization, management for bronchiectasis has been ongoing for over six months without any recurrent bleeding. Due to the lack of a standardized treatment approach, there are no definite treatment strategy. Further research with a larger number of cases is necessary to establish the most effective management options.

Figure 1

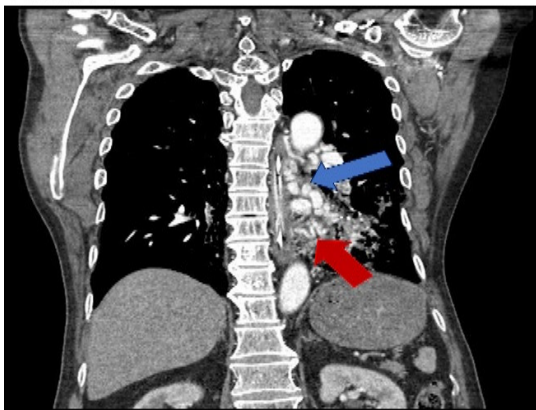


Figure 2

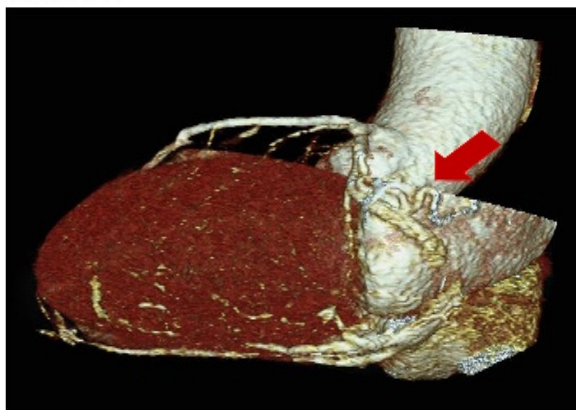


Figure 3-1



Figure 3-2

