

Title:

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DOI: 10.17235/reed.2023.9761/2023

Link: [PubMed \(Epub ahead of print\)](#)

Please cite this article as:

Sun Zhaonan, Huang Wenpeng, Wang Xiaoying. Esophago-pulmonary artery fistula caused by fish bone impaction. Rev Esp Enferm Dig 2023. doi: 10.17235/reed.2023.9761/2023.

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Esophago-pulmonary artery fistula caused by fish bone impaction

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Author contributions: Zhaonan Sun and Wenpeng Huang contributed equally to this work.

Conflicts of interest: the authors declare that they have no conflicts of interest in this study.

Keywords: Computed tomography. Fistula.

Dear Editor,

We present a case of a 65-year-old male who experienced posterior sternal pain, accompanied by a week-long fever following the consumption of fish. Computed tomography (CT) examination showed a fish bone in the middle esophagus, along with a small amount of gas in the mediastinum. A focal pseudoaneurysm formation was observed in the posterior wall of the left pulmonary artery trunk, accompanied by the presence of gas and septic emboli in the main trunk of the left pulmonary artery and some of its branches. Furthermore, distal pulmonary tissue infarction with associated infection was observed (Fig. 1A-F). The clinical diagnosis was esophago-pulmonary artery fistula caused by fish bone impaction.

Reports of esophago-pulmonary artery fistulas without involvement of the trachea or bronchi are rare (1). Clinically, these cases often present with nonspecific symptoms such as chronic cough, recurrent lung infections and hemoptysis, resulting in delayed diagnosis (2). In this particular case, the patient's condition rapidly progressed following fish bone penetration through the esophageal wall, manifesting symptoms of infection and gastrointestinal bleeding. When there is a suspicion of fish bone impaction, it is recommended to perform a CT scan to ascertain the precise location of the fish bone. In situations where the fish bone is fully embedded or migrating, endoscopy may

yield inconclusive results, thus highlighting the particular utility of CT imaging (3). It also facilitates the visualization of the fistula location and assessment of its depth (4,5). In this case, the fish bone penetrated the mid-segment of the esophageal wall and the main trunk of the left pulmonary artery. There was a focal pseudoaneurysm in the posterior wall of the left pulmonary trunk. Subsequently, the esophageal contents and gas entered the mediastinal main pulmonary artery window and the left pulmonary artery through the fistula, resulting in putrid infection and gas/bacterial embolism.

Ghosh et al. (1) reported a case of esophago-pulmonary artery fistula that resulted in a lung abscess, which showed a positive response following alleviation treatment involving the placement of a self-expandable esophageal stent and drainage of the abscess. Ravina et al. (2) described a case of esophago-pulmonary artery fistula complicated by pneumothorax, where the patient's condition rapidly deteriorated and led to fatality. In our case, the patient underwent endoscopic removal of the foreign body and received systemic antibiotic treatment. Due to the small size of the fistula opening and the absence of indications for intervention-related surgery, anticoagulant therapy was initiated to prevent the formation of new pulmonary artery thrombosis.

In conclusion, despite the rarity of esophago-pulmonary artery fistula resulting from fish bone impaction, its inclusion in the differential diagnosis of lung infections is crucial.

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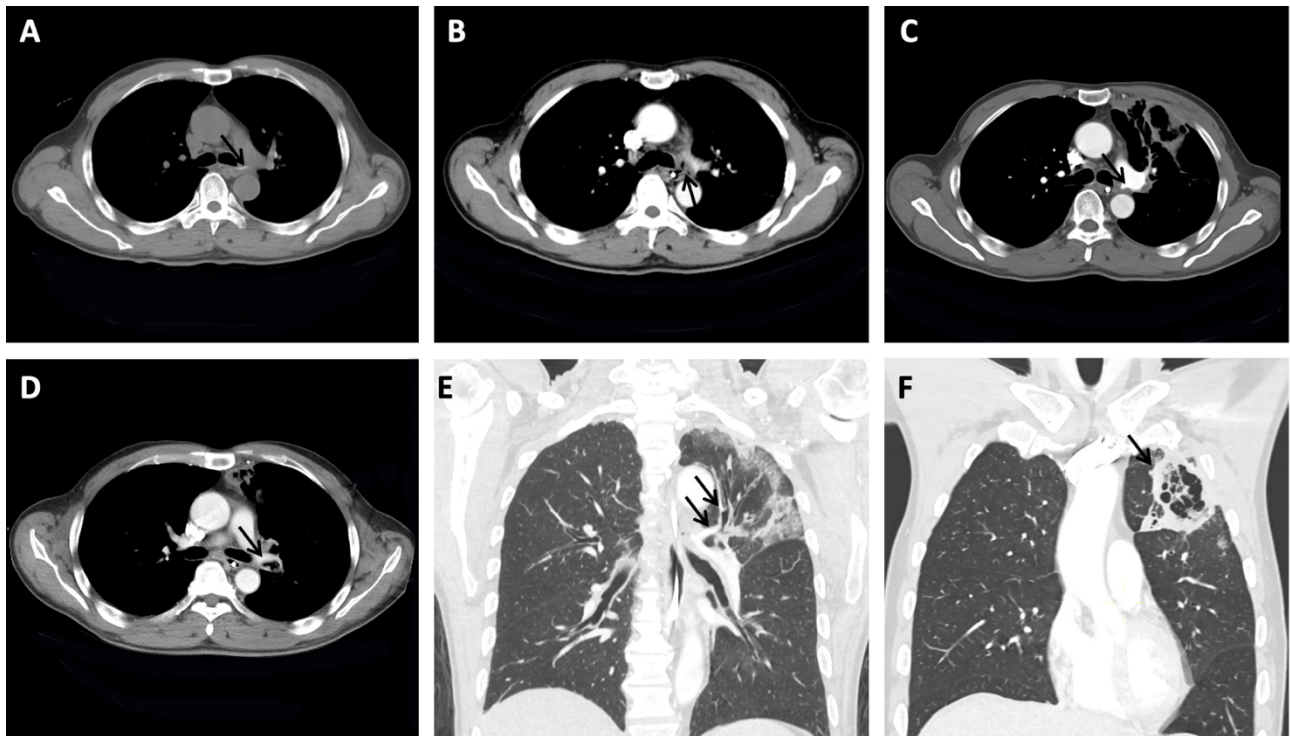


Fig. 1. Esophago-pulmonary artery fistula caused by fish bone impaction. The image shows a fish bone (A, arrow), air in the mediastinum (B, arrow), a pseudoaneurysm (C, arrow) and air with bacterial embolus in the left pulmonary trunk (D, arrow). By the fourth week, the wall of the left pulmonary artery and its branches exhibited thickening (arrow), with intratumor gas and secondary pulmonary infarction (E). In the fifth week, cavitation formed after infarction (F, arrow).