Successful management of aorto-oesophageal fistula with dual oesophageal and aortic intervention

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A 64-year old female presented with retrosternal pain and haematemesis after ingestion of a fish bone. Computed tomography (CT) angiography confirmed aorto-oesophageal fistula (Fig. 1). A retrievable oesophageal stent was placed to achieve initial partial haemostasis. An endoluminal stent was inserted within the thoracic aorta isolating the fistula (Fig. 2). The patient recovered uneventfully.

Figure 1: The patient underwent an emergency oesophageal endoscopy after swallowing a fish bone. At oesophagoscopy, a fish bone situated 25 cm from the incisors was removed uneventfully. Seven days later, she developed retrosternal pain and haematemesis. She vomited ~200 ml of bright red blood. Bilateral oesophageal perforations with local fester were found 25 cm away from the incisors in oesophagoscopy examination. A diagnosis of aorto-oesophageal fistula was made. A removable oesophageal stent (long arrow (A)) was implanted to isolate the oesophageal perforation. Axial CT angiography revealed a rupture of the thoracic aorta (short arrow (A)) and numerous air bubbles and fluid collection around the thoracic aorta. Sagittal reconstruction (B) and volume rendering (C) of CT angiography showed an aortic pseudoaneurysm (arrow) at the anterior wall of the thoracic aorta.

Figure 2: An aortic endovascular stent graft (COOK) was inserted into the thoracic aorta to seal the fistula followed by thoracoscopic mediastinal debridement and drainage. Axial CT angiography image (A) and volume rendering (B) demonstrated successful tamponade of the fistula. The oesophageal stents avoid saliva and exudates passing through the oesophageal fistula into the mediastinum to prevent mediastinal infection. The retrievable oesophageal stent was removed after 65 days (C). The patient subsequently made an uneventful recovery.

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