

A Pneumatic Aorta: Aortoesophageal Fistula Due to Chronic Aortic Dissection

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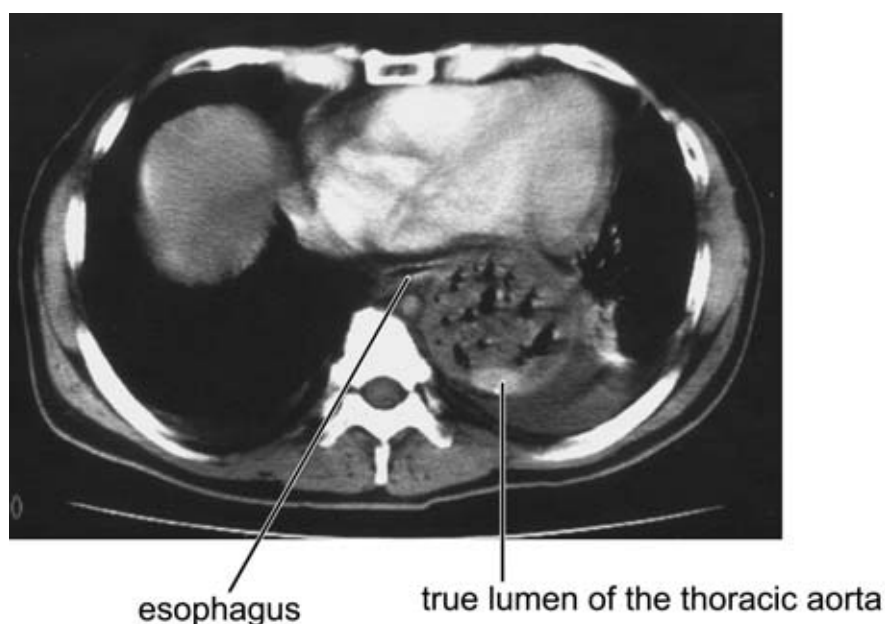


Fig. 1

A 56-year-old man was admitted to our hospital with a chief complaint of severe back pain. He had had a severe cough for one week before admission and had a history of acute aortic dissection (DeBakey type IIIb, Stanford type B) 9 years earlier. Enhanced computed tomography revealed a descending thoracic aortic aneurysm with multiple air density sites in an intraluminal thrombus (**Fig. 1**) and chronic abdominal aortic dissection with three lumens. Gastrofiberscopy revealed an aortoesophageal fistula, with coagulation surrounding the mucosal elevation (**Fig. 2**) and esophageal stenosis due to a descending thoracic aortic aneurysm.

It is generally believed that the pressure of the aorta is higher than the pressure of the esophagus, so the air in the esophagus should never enter the lumen of the aorta. However, the phenomenon was recognized in this case. We believe it was due to the following reasons. (1) The pressure in the esophagus was temporarily higher than the pressure of the aorta due to the high intrathoracic pressure during a severe cough. (2) Any active bleeding from the aorta was prevented by an extremely thick thrombus between the esophagus and the true lumen of the aorta (**Fig. 1**).

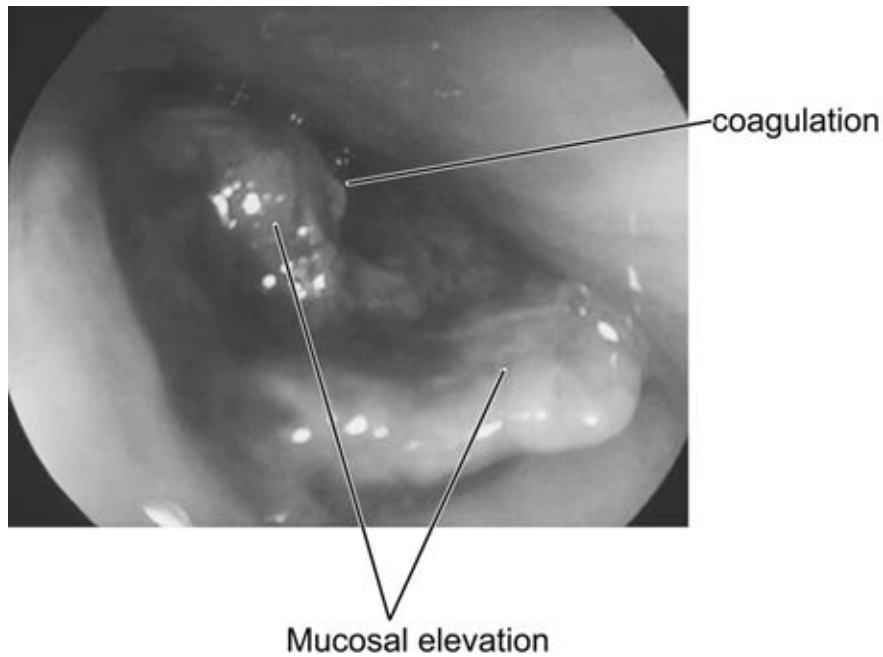


Fig. 2

When an aneurysm ruptures into the esophagus, the resulting aortoesophageal fistula will usually lead to fatal gastrointestinal bleeding. In fact, 60% of patients die within 6 hours after the first arterial bleeding¹. Survival depends on early diagnosis and surgical treatment, involving the repair of the aneurysm, debridement of adjacent tissues, and treatment of the esophageal tear along and esophagectomy. We tried to operate immediately. However, surgery was impossible because of the unstable vital signs due to septic shock. The patient's condition ultimately prevented us from performing any invasive operations. Unfortunately, the patient died of sepsis 11 days after admission.

Fig. 1 Enhanced computed tomography on admission showing a descending thoracic aortic aneurysm with multiple air density sites in an intraluminal thrombus.

Fig. 2 Gastrobioscopy showing an aortoesophageal fistula with coagulation surrounding the mucosal elevation.

Reference

1. Coselli JS, Crawford ES: Primary aortoesophageal fistula from aortic aneurysm: Successful surgical treatment by use of omental pedicle graft. *J vasc Surg* 1990; 12: 269-277.