

CASE REPORT

An unusual cause of dysphagia: thoracic aorta aneurysm

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ABSTRACT

The vascular structure related compression of esophagus is rather rare. Aberrant right subclavicular artery accounts for the majority of the rare entity, while the thoracic aorta aneurysm is a more dangerous type, called as dysphagia aortica. Delay in diagnosis and treatment of the dysphagia aortica predisposes to rupture and death. Herein, we reported a female patient with thoracic aorta aneurysm. A quick diagnosis by using chest contrast computed tomography (CT) scan and angiography of heart was made, and followed by emergent surgery. In the process, there was no delay on the diagnosis and treatment. The patient is going on well in the follow up.

KEYWORDS

Dysphagia; thoracic aorta aneurysm; dysphagia aortica; saccular aneurysm; 128-slice computed tomography (CT) angiography

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Introduction

Dysphagia is a common complaint of patients with thoracic disease, and often arises from obstruction of the upper digestive tract or extrinsic compression of the esophagus. Sometimes it is associated with neuromuscular disorder (1,2). However, dysphagia caused by vascular compression is rare. Most thoracic surgeons are familiar with dysphagia lusoria, on which the esophagus is compressed by an aberrant right subclavian artery (2,3). The dysphagia aortica (dysphagia due to aneurysm compression) is an unusual concept needs further elucidation (4). Any delay should be avoided to prevent rupture of the aneurysm and imminent death, especially when dysphagia is accompanied by chest or back pain (5). Our case described a female patient with dysphagia aortica caused by saccular aneurysm of the thoracic aorta, who received quick diagnosis and surgical intervention with good prognosis. The case indicates that the dysphagia aortica is one of differentiations of patient with dysphagia, especially when it coexists with symptom of chest pain under the condition of no neoplasm is found by using endoscopy or barium study. To our knowledge, this is the

first case that describes a saccular aneurysm presenting with dysphagia.

Case presentation

A 56-year-old woman had suffered with dysphagia for six months and a sudden chest pain when diet two days before this visit. And the pain worsened during diet. In physical examination, the blood pressure was 160/80 mmHg, but without any other positive finding. The routine chest X-ray examination was normal, while the oral barium study revealed a mild narrow of the esophagus at 32 cm away from the incisor teeth, with the local esophageal mucosa smooth and intact. Thus, an external oppressive lesion was suspected. We performed the chest contrast computed tomography (CT) scan, which suggested a descending aorta aneurysm accompanied with moderate compression into the adjacent esophagus (Figure 1A,B). In order to learn more about the spatial location of the lesion, we also performed the 128-slice CT angiography, which further demonstrated a three-dimensional aneurysm arising from descending aorta, extending to the right posterior direction (Figure 1C,D). Considering the intimate relationship between esophagus and aneurysm in the patient, she underwent a thoractomy in emergency. At the operation, we found no esophageal tumor or mediastinal mass, except for a saccular aneurysm of the thoracic aorta (the neck width is 26.3 mm in diameter), which compressed tightly towards the middle esophagus. Fortunately, the adhesion could be separated easily, and we performed the tangential aneurysmatectomy and arteriorrhaphy successfully without esophageal injury. The postoperative evolution was uneventful with rapid disappearance of the symptoms. Now, she is going on

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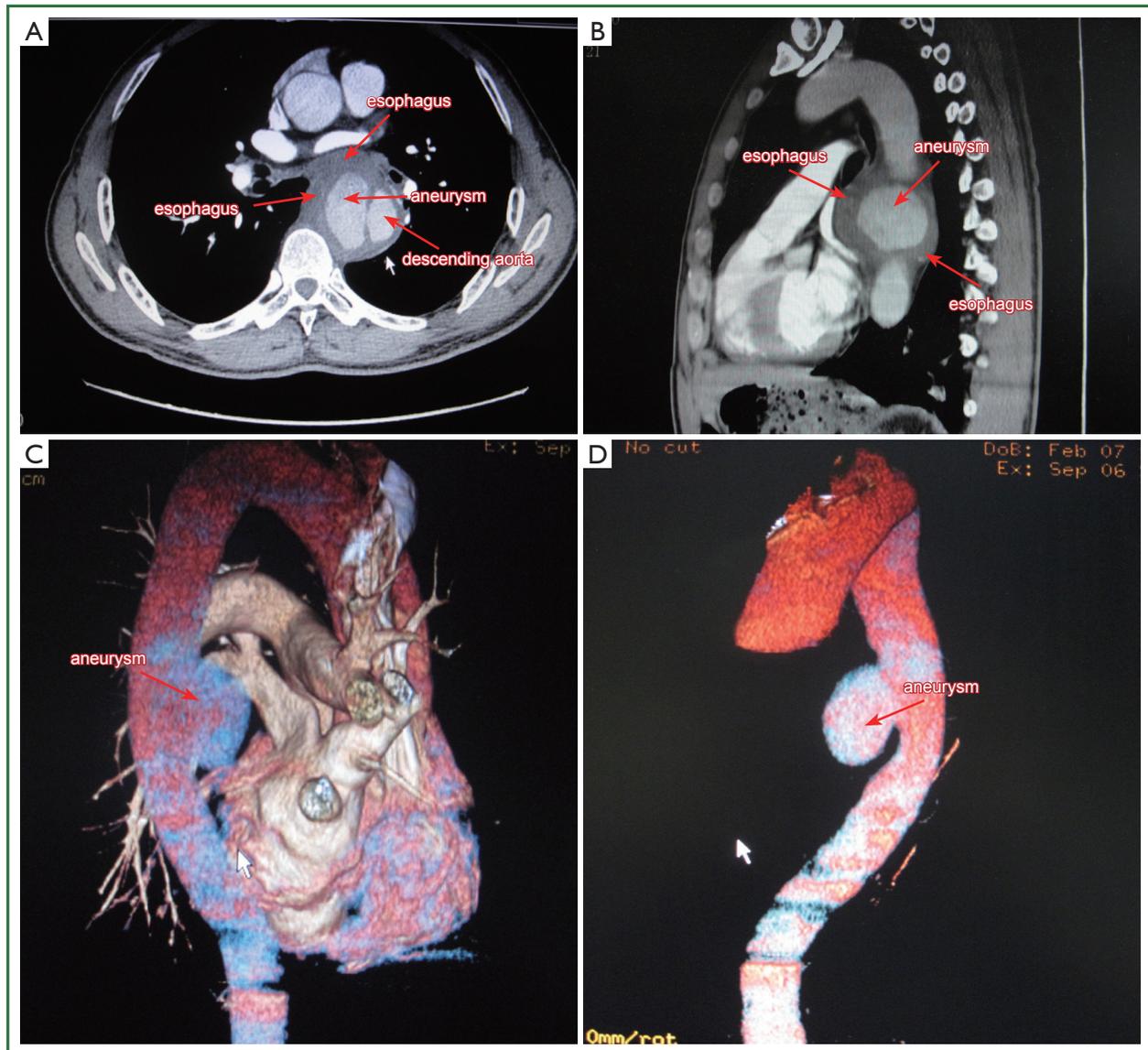


Figure 1. (A,B) The chest contrast computed tomography (CT) scan showed a descending aorta aneurysm with moderate compression into the adjacent esophagus; (C,D) The 128-slice computed tomography (CT) angiography showed a three-dimensional aneurysm arising from descending aorta, extending to the right posterior direction.

well in the follow-up.

Discussion

Dysphagia arises from neuromuscular motility disorders, intrinsic obstruction and extrinsic compression of the esophagus (1,2). Extrinsic compression by a vascular structure is uncommon. On occasion, the thoracic aorta aneurysm compresses to the esophagus, causing difficulty in swallowing. The clinical entity was also reported in term of “dysphagia aortica”, which accounts for a minority of vascular related compression, posterior to dysphagia lusoria (2,3,6).

In general, dysphagia occurs in esophageal disease. However,

when there is no functional or organic esophageal abnormality, extrinsic compression of the esophagus should be considered. The chest contrast CT scan is a useful tool to describe the right location of the compressed lesion as well as its relationship with the surrounding tissues including the arteries. The mediastinal mass might be discovered commonly, and the thoracic surgery can alleviate the symptom. However, in this case, a significant contrast mass adjacent to the descending thoracic artery was presented, which remind us of an abnormal vascular structure. Thus, the 128-slice CT angiography of heart was performed to further locate the accurate position of the lesion and its relationship with the main artery and heart, which contributed to a rapid and accurate diagnosis of dysphagia aortica. In the

previous reports (7), there is no gold standard diagnostic procedure for dysphagia aortica. Generally, the diagnostic approach of dysphagia aortica mainly includes standard chest radiography, chest CT, barium swallow study and esophageal manometry (2,8). However, the patient in the case had a saccular aneurysm, which was difficult to be discovered by a simple chest radiography. The chest contrast CT scan and 128-slice CT angiography contributed greatly to the accurate diagnosis. Herein, we emphasized that both examinations we used above were non-traumatic tools when compared with the traditional and interventional X-ray examination. So we recommended the contrast CT scan as quick as 128-slice CT angiography, and perhaps routine tools for diagnosis of dysphagia aortica in highly suspected individuals.

Thoracic aneurysms are usually asymptomatic. Once the symptom appears, it can result in fatal outcome. However, dysphagia is very common in esophageal cancer patient, and the chest pain is not rare when the tumor invades the surrounding tissues, such as the posterior pleural and the vertebra. The same symptom occurs in different disease might hint distinct outcomes. So dysphagia aortica should not be ignored, because the chest or back pain is dangerous signal of the thoracic aneurysms. A high index of clinical suspicion was important for identifying patient with dysphagia aortica (6). We should keep in mind that the thoracic aorta aneurysm is an unusual cause of dysphagia. Surgical treatment should be performed urgently to

prevent imminent rupture and death.

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