

# Title: Blue esophagus as a diagnosis of aortic dissection

Authors: María Reyes Busta Nistal, Lourdes del Olmo Martínez, Luis Fernández Salazar

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### Blue esophagus as a diagnosis of aortic dissection

María Reyes Busta Nistal<sup>1</sup>, Lourdes del Olmo Martínez<sup>1</sup>, Luis Fernández Salazar<sup>1</sup> <sup>1</sup>Serivicio de Aparato Digestivo. Hospital Clínico Universitario de Valladolid

### **CORRESPONDING AUTHOR:**

MR Busta Nistal Email: reyesbn@gmail.com

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Dear Editor,

We report a case of acute dysphagia caused by contained rupture of thoracic aortic dissection.

A 76-year-old patient, admitted to the department of cardiac surgery, anticoagulated with heparin, pending surgical intervention for revascularization of three-vessel coronary artery disease, started with acute dysphagia.

An upper endoscopy was then performed, revealing a blue mucosa of the esophagus, from the upper esophageal sphincter to distal esophagus, until two centimetres above the esophagogastric junction. A narrowing of the upper third of the esophageal lumen caused by an extrinsic compression, was also observed.

An esophageal submucosal hematoma was suspected, therefore a computed tomography (CT) of the thorax was performed. The CT showed a 85x55 mm mediastinal hematoma causing extrinsic compression of the esophagus. Subsequently, a contrast-enhanced CT scan was performed, confirming a contained rupture of descending thoracic aortic dissection as the cause of the hematoma.

# DISCUSSION

Dysphagia caused by extrinsic compression of the esophagus is an unusual cause of dysphagia, and may occur through mediastinal masses (lymphadenopathy, lung cancer) and cardiovascular causes (dysphagia aortica, massive pericardial effusion,



enlarged left atrium) among others (1).

We refer to dysphagia aortica to describe a type of dysphagia caused by external compression of the esophagus from an aneurysmal aorta (most common) or a tortuous, ectatic aorta (1,2). We must take into account this etiology in the differential diagnosis of dysphagia, especially in elderly patients with risk factors for cardiovascular disease (2).

There is no gold standard diagnostic tool for dysphagia aortica. The endoscopic findings may be non-specific: stenosis, pulsatile extrinsic compression or kinking of the esophagus (1). The interest of our case lies in the endoscopic image observed: a blue esophageal mucosa from the upper esophageal sphincter until two centimetres above the esophagogastric junction. Firstly we suspected a dissecting esophageal hematoma, however, the great extension of the findings, affecting practically the whole length of the esophagus, made us perform a CT which confirmed the finding of an extensive mediastinal hematoma. No similar endoscopic findings have been reported in the reviewed literature. It is worth highlighting the difference with acute esophageal necrosis, also described in patients with cardiovascular diseases, with an image of a diffuse black esophageal mucosa covered by ulcers and fibrin (3).

Our patient was considered candidate for surgery, however, due to the severity of the findings, he died days after the procedure. Mild cases of dysphagia aortica may be treated conservatively, with diet modification and treatment of the underlying diseases (1). Nevertheless, patients with more severe symptoms may require surgery, darkening the prognosis (2).

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**Fig.1.** Endoscopy: blue esophageal mucosa with narrowing of the lumen caused by an extrinsic compression.