

Mimicking esophageal cancer: esophageal actinomycosis

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Running head

Esophageal actinomycosis

Conflict of interest

None

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Clinical pictures

A 75-year-old woman without any significant past medical history presented with a rapid progressive dysphagia with odynophagia, regurgitations and weight loss. She denied any other complaint, fever or oral thrush. She is an active smoker. There was no underlying immunosuppressive condition. The physical examination was unremarkable.

A high resolution manometry showed an incomplete relaxation of the lower oesophageal sphincter with intermittent periods of panesophageal pressurization; compatible with a type II achalasia according to the Chicago Classification. A POEM (Per Oral Endoscopic Myotomy) was therefore proposed. During the procedure, an abnormal bulging with a distortion of the normal mucosal pit pattern was identified at the lower esophageal junction, causing a stenosis. An underlying neoplastic lesion was suspected and prompted endoscopic biopsies as well as further characterization with an endoscopic ultrasonography (EUS) were performed. This was suggestive for a neoplastic lesion of 28x17mm, extending into the muscularis mucosae; staged uT3N0 according to the TNM classification.

18-fluoro-deoxyglucose (FDG) positron emission tomography/computed tomography (PET/CT) showed an intense focal FDG uptake at the level of the esophageal lesion without any other captation areas.

CT-scan with contrast revealed an asymmetric thickening of the cardia with two enlarged lymph nodes near the esophagus, compatible with neoplasia.

A laparoscopic exploration and jejunostomy were proposed regarding severe dysphagia and weight loss of the patient. No liquid nor tumoral signs were noted during the procedure.

In the absence of anatomopathological confirmation of neoplasia, new samples were suggested to confirm tumoral diagnosis.

An esophagogastroduodenoscopy and EUS were then repeated. Histology failed to demonstrate malignancy but revealed numerous branching filamentous organisms invading inflammatory tissue consistent with the diagnosis of actinomycosis. A new puncture of the lesion was therefore realized which allowed to culture Gram-positive anaerobic bacteria, identified with matrix-assisted laser desorption ionization–time of flight mass spectrometry (MALDI-TOF MS) as *Actinomyces odontolyticus* susceptible to amoxicillin.

After infectious disease consultation, a treatment with amoxicillin was initiated with a progressive resolution of symptoms.

Picture quiz

A 75-year-old woman presented progressive dysphagia and weight loss. What is the most likely diagnosis ?

- 1) Esophageal cancer
- 2) Actinomycosis infection
- 3) Plummer-Vinson syndrome
- 4) Esophageal achalasia