

# A RARE PRESENTATION OF HISTOPLASMOSIS DIAGNOSED BY EUS

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## Abstract

A 24-years-old woman patient with no medical history, complaining of dyspepsia for a year, underwent an esophagogastroduodenoscopy. It was detected a subepithelial lesion at the anterior wall of the thoracic esophagus 28 cm from the incisors, with an elongated appearance and a central orifice, measuring 6 mm (A). The patient denied previous surgeries or recent travel.

At endoscopic ultrasound (EUS) the subepithelial lesion corresponded to a lymph node conglomerate, composed of three coalesced lymph nodes, measuring 25x17 mm, located between the left atrium, the pulmonary artery and the esophagus (B).

This lymph node conglomerate presented contiguity with the esophageal wall, which was thickened. No other lymph nodes enlargement was

identified. FNB (Acquire®, Boston Scientific, Marlborough, Massachusetts, USA) was performed with a 22 Gauge needle.

Histology revealed a chronic granulomatour process, with caseous necrosis (C). The research for fungus resulted positive with small yeast-like structures, without budding aspects compatible with histoplasmosis (D).

# Commentary

Histoplasmosis is an endemic fungal disease with high prevalence in the Americas, Mediastinal granulomas (MG) can arise early or late after the initial infection.

They are commonly asymptomatic. However, this necrotic LC may course with, symptoms through compression of neighboring organs (bronchial tree, superior vena cava, pericardium, and esophagus) or fistulas.,Esophageal involvement of MG occurs in 5 to 13% of patients, typically affecting the subcarinal region and cursing with dysphagia, ponderal loss, bleeding and pain, The diagnosis of MG can be made through ecoendoscopy that allows the precise evaluation of the mediastinal structures, as well as tissue sampling.

**Key words:** *Histoplasmosis, Endoscopic Ultrasound-Guided Fine Needle Aspiration, lymph nodes.* 

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## Introduction

Histoplasmosis is an endemic fungal disease caused by the dimorphic fungus H. capsulatum, with a high prevalence in the Americas [1, 2, 3, 5]. In Brazil, Rio de Janeiro is the area with the highest number of cases. Although most patients are asymptomatic, symptoms may vary depending on the patient's age, level of immunosuppression, and the size and number of inoculums inhaled [5].

## **CASE REPORT**

A 24-year-old female patient with no medical history presented with dyspepsia for one year and underwent an esophagogastroduodenoscopy. During the procedure, a subepithelial lesion was detected on the anterior wall of the thoracic esophagus, 28 cm from the incisors. The lesion had an elongated appearance, a central orifice, and measured 6 mm (A). The patient denied any previous surgeries or recent travel.

During the endoscopic ultrasound (EUS), it was found that the subepithelial lesion was a conglomerate of three coalesced lymph nodes measuring 25x17 mm. The conglomerate was located between the left atrium, the pulmonary artery, and the esophagus (B) and was contiguous with the thickened esophageal wall.

No other lymph node enlargement was identified. A fine-needle biopsy (FNB) was performed using a 22-gauge needle (Acquire®, Boston Scientific, Marlborough, Massachusetts, USA). Histology revealed a chronic granulomatous process with caseous necrosis (C). Fungal research yielded positive results with small yeast-like structures, without budding aspects compatible with histoplasmosis (D).

Following the procedure, the patient was referred to the Infectology department and responded well to treatment with itraconazole.

#### DISCUSSION

Mediastinal granulomas (MG) can develop early or late after the initial infection [3]. They are often asymptomatic [1]. However, this necrotic lymph node conglomerate may cause symptoms by compressing neighboring organs such as the bronchial tree, superior vena cava, pericardium, and esophagus, or by causing fistulas [2,3].

Esophageal involvement in MG occurs in 5 to 13% of patients, typically affecting the subcarinal region and causing dysphagia, weight loss, bleeding, and pain [2]. The diagnosis of MG can be made through echoendoscopy, which allows for precise evaluation of mediastinal structures and tissue sampling. Differential diagnosis of MG includes malignant pathologies such as lung neoplasms, metastases, and hematological neoplasms (lymphoma), as well as benign pathologies such as granulomatous

lymphadenitis secondary to tuberculosis, histoplasmosis, or sarcoidosis [2, 3, 4, 5].

Anti-fungal treatment is not recommended for mediastinal granulomas caused by histoplasmosis. However, itraconazole may be prescribed for symptomatic patients (200mg three times daily, then once or twice daily for 6-12 weeks). In cases of extrinsic compression by the lymph node, surgery may be necessary. [1] [2] [3].

#### CONCLUSIONS

Although not rare in the mediastinum, as far as we know, this is the first reported case of histoplasmosis (lymph node conglomerate) diagnosed by EUS with FNB as a subepithelial lesion in the esophagus.

This case also highlights the importance of considering histoplasmosis as a possible diagnosis in patients with subepithelial lesions in the esophagus.



**A.** Endoscopic view - subepithelial lesion 28 cm from the incisors.



**B.** EUS view - Lymph node conglomerate - 25x17 mm.



**C.** Histology revealed a chronic granulomatour process, with caseous necrosis.



**D.** High magnification of GROCOTT (400x) - small yeast-like structures without budding.

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