

Compressive Tuberculous Mediastinal Lymphadenitis Revealed by a Dysphagia, Mimicking an Esophageal Tumor

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Abstract

Isolated mediastinal tuberculous lymphadenitis among adults are rare and their presentation by dysphagia is even rarer. As the malignancies of the esophagus are the most important causes of dysphagia, they must be mastered foremost. The invasive techniques are generally required to get histological confirmation. We report the case of a 69-year-old woman, current smoker, complaining of isolated dysphagia, evolving for four months. The clinical, endoscopic and the radiological presentation were that of a submucosal tumor of the esophagus. The Mediastinoscopy and the histopathology confirmed the lymph node origin of the mediastinal mass and the tuberculous nature of this lymphadenitis.

Keywords: Dysphagia; Mediastinal lymphadenitis; Neoplasm; Tuberculosis

Introduction

The Mediastinal lymphadenitis, as the only presentation of adult tuberculosis, is rare [1,2]. Rarer is the dysphagia as the only presenting symptom of mediastinal tuberculous lymphadenitis (MTL) [3-6]. In the esophagus, the most common causes of dysphagia are squamous cell adenocarcinoma (as the most common type of malignant tumors) and leiomyoma (as the most common type of mesenchymal neoplasms). However, dysphagia associated with esophageal mechanical obstruction can be caused by several conditions, mainly endoluminal and mucosal lesions, intramural tumors or extrinsic compression.

Despite the technological improvements in the diagnostic techniques and methods, the definitive diagnosis and differentiation of submucosal parietal lesions from extrinsic ones compressing the esophagus may only be established after surgery. We report one case of dysphagia caused by MTL, presenting an esophageal intramural tumor.

Case Report

A 69-year-old woman who had complained, for four months before admission, of dysphagia for solid food and more recently for liquids too, underwent an upper gastrointestinal (GI) endoscopy in gastro-enterology department. The GI endoscopy had shown an extrinsic compression of the esophagus, so she was transferred in our department for further exploration. There was no past medical history (particularly no exposure to tuberculosis) nor family history. She also had no other digestive symptoms or respiratory complaints (cough or sputum). She also didn't have deterioration in general condition (weight loss, anorexia, and asthenia) or night sweating.

The clinical examination was normal. Her hematological tests showed high erythrocyte sedimentation rate (80 mm in the first hour) without elevation of white blood cells, and the other biochemical tests were normal. Sputum microscopy for acid-fast bacilli was normal.

Chest X-ray showed a superior mediastinal enlargement (Figure 1) and upper GI endoscopy (Figure 2A) showed a three-centimeter compression of the esophageal wall, covered by normal mucosa, and located 30 centimeters from the anterior incisor teeth. Barium swallow esophagogram (Figure 2B) disclosed a three-centimeter protruding lesion on the anterior wall of the proximal esophagus. Thoracic CT scan showed cystic bronchiectasis of the lower left lobe and a large necrotic mass (6 x 3.5 x 3 cm) compressing the left postero-lateral wall of the trachea responsible for narrowing its lumen (Figures 3). Flexible bronchoscopy revealed an extrinsic compression of the trachea on the first centimeters of its left lateral wall. A thoracic MRI was indicated and had shown a paratracheal mass with intermediate signal in T1 and T2-weighted images. This mass was centered by a fluid signal area and it appeared in continuity with the anterior wall of the esophagus (Figure 4).

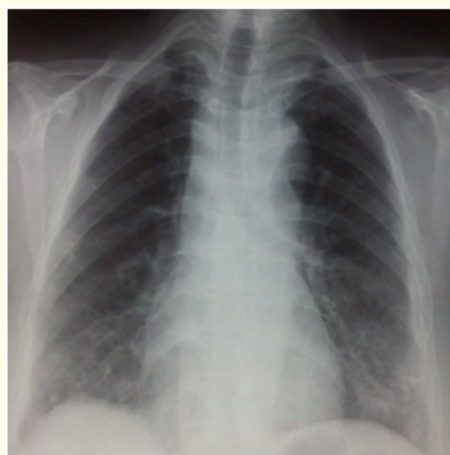


Figure 1: Superior mediastinal enlargement on chest X-ray.



Figure 2A: Narrowing of the esophageal lumen on the upper gastrointestinal endoscopy.

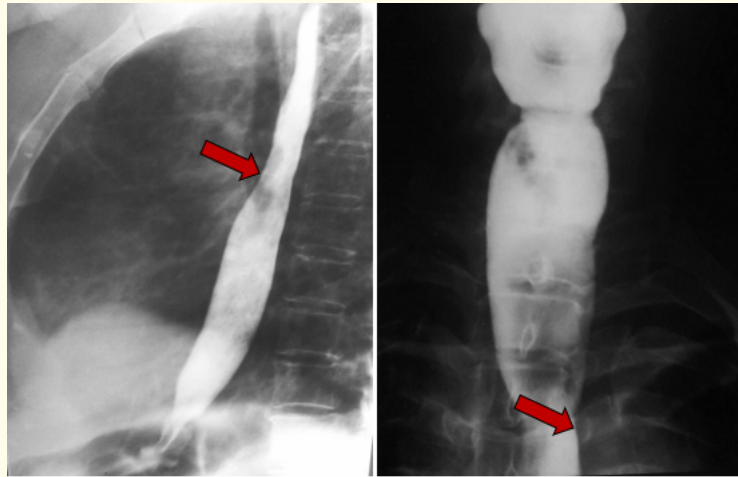


Figure 2B: Esophageal compression on barium swallow esophagogram (red narrow).

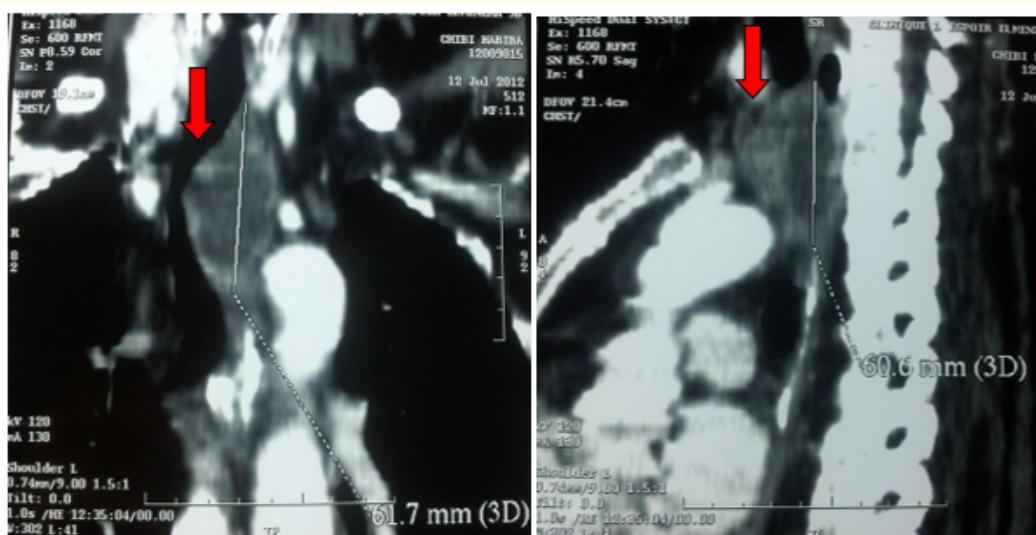




Figure 3: Necrotic mediastinal mass on chest CT scan, compressing the left postero-lateral wall of the trachea (red arrow).

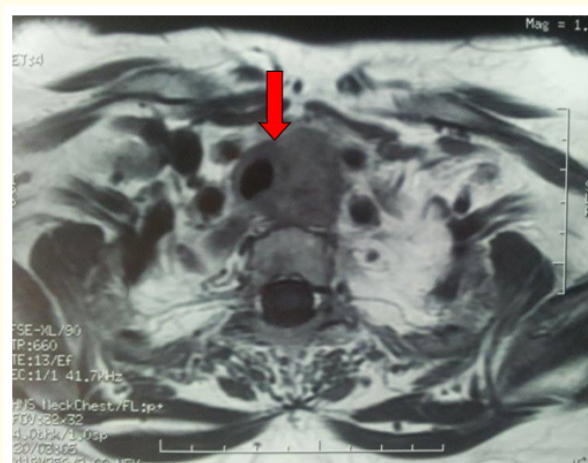


Figure 4: Paratracheal mass with intermediate signal in T1 on chest MRI (red arrow).

Surgery was indicated, and the patient underwent a mediastinoscopy with a biopsy of the mass. Frozen examination and then definitive pathological examination of the specimen showed lymph node parenchyma containing granulomatous inflammation with caseous necrosis. Ziehl-Neelsen stain of the specimen, however, failed to isolate acid-fast bacilli.

The patient received a postoperative anti-tuberculous treatment associating isoniazid, rifampicin, pyrazinamide and ethambutol hydrochloride according to the national guidelines. Dysphagia disappeared at the end of the treatment and the patient was in good health two years after discharge.

Discussion

Despite the decline in the incidence of tuberculosis, lymph node location remains common in our country reaching 8/100000 inhabitants in 2012 [7]. Mediastinal lymphadenitis as the only presentation of adult tuberculosis is rare [1,2]. But multiple papers reported a higher incidence of tuberculosis in isolated mediastinal lymphadenopathies. McManus., *et al.* found 31.9% (15 of 47 patients) of TB IML diagnosed by mediastinoscopy in a retrospective study [8]. Similarly, Navani., *et al.* found 36% (28 of 77 patients) of tuberculosis in IML diagnosed by Endobronchial Ultrasound-guided Transbronchial Needle Aspiration (EBUS-TBNA) [9].

Dysphagia as the only revealing symptom of benign lesions and especially mediastinal tuberculous lymphadenitis is a rare presentation [3-6]. In the esophagus, squamous cell adenocarcinoma as the most common type of malignant tumors and leiomyoma as the most common type of mesenchymal neoplasms, represent the most frequent causes for dysphagia. However, dysphagia associated with esophageal mechanical obstruction can be caused, in addition to endoluminal tumors, by several conditions such as intramural tumors or extrinsic compression.

Submucosal tumors of the esophagus are tumors that cause endoluminal protrusion of the digestive wall with normal macroscopic aspect of the mucosa. However, these features may be also encountered in lesions that extrinsically compress the esophagus [10]. In our case, the barium swallow showed an acute angle between the esophageal wall and the margin of the tumor which suggested its intrinsic origin.

Esophageal endoscopic ultrasonography (EUS) is described as the best diagnostic method to distinguish intraparietal lesions from extrinsic ones compressing the digestive wall, with a diagnostic accuracy superior to CT-scan and the barium swallow [11-13].

Although EUS-guided fine needle biopsy is possible in these lesions, the material obtained is sometimes insufficient for a definitive diagnosis and to eliminate malignancy [12,14-16]. Xiong, *et al.* had negative cytopathology, bacilli culture and PCR test when they analyzed specimen obtained by EUS in hypoechoic lesion compressing the esophagus [9]. In our patient, the lesion was necrotic, so EUS-guided fine needle aspiration may be non-contributive. Moreover, this technique wasn't available in our public hospitals.

Conventional mediastinoscopy is a safe procedure associated with low mortality (0% to 0.05%) and morbidity (0% to 5.3%). It has high levels of accuracy (83.8% to 97.2%), and negative predictive value (81% to 95.7%) [17]. So, in our country, it is the most used technique for the diagnosis of isolated mediastinal lymphadenopathy.

Conclusion

Isolated tuberculous mediastinal lymphadenitis is a rare condition in immunocompetent adults. Despite improvements in the diagnostic tools, the definitive diagnosis and distinguishing submucosal parietal lesions from extrinsic lesions compressing the esophagus may only be established after surgery.

Conflict of Interest

Authors declare not having any conflict of interest.

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