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## A case report on esophageal tuberculosis – A rare entity



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## ABSTRACT

This is a case report of a rare form of tuberculosis in a patient presenting with dysphagia. Patient was subjected to upper gastrointestinal endoscopy, which revealed an ulcerative growth in the distal esophagus. Histopathology revealed esophageal tuberculosis. Patient was managed conservatively with Anti-Tuberculosis Treatment (ATT). Follow up endoscopy after two months revealed resolution of the growth and patient was symptomatically better. In spite of the rare nature of the disease, it can be managed effectively with ATT to avoid complications (fistula, stricture, and esophageal perforation), which might warrant surgery.

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## 1. Introduction

Esophageal Tuberculosis is a rare condition (accounts for only 2.8% of all cases of Gastrointestinal Tuberculosis) [1]. It usually occurs as a result of direct spread from mediastinal nodes (rarely from the lungs or bloodstream). It mostly presents as dysphagia and histopathology confirms the diagnosis. Left untreated, esophageal tuberculosis can lead to bleeding, perforation, fistula formation, aspiration pneumonia, fatal hematemesis, traction diverticula and esophageal strictures [5,3]. This case was managed in an academic setting. I hereby declare that my work has been reported in line with the SCARE criteria [14].

## 2. Case presentation

A 60-year-old female came to our hospital with complaints of dysphagia for 4 months (primarily for solids), with loss of weight and appetite. No history of cough with expectoration. No history of fever. Patient was apparently normal prior to these 4 months. Blood investigations revealed leucocytosis with lymphocytosis, with an elevated Erythrocyte Sedimentation Rate. Patient tested negative for Human immunodeficiency virus (HIV). Patient underwent Upper Gastrointestinal Endoscopy by an experienced gastroenterologist which revealed a hemi circumferential ulcerative growth from 30 cm to 34 cm in the distal esophagus from which biopsy was taken (Fig. 1). Contrast enhanced computed tomogra-

phy of the thorax showed circumferential thickening involving the distal esophagus, no evidence of invasion of adjacent structures seen, enlarged aortopulmonary lymph node with necrosis (Fig. 2). Histopathology revealed ill defined epithelioid granulomas with giant cells and caseating necrosis, no evidence of malignancy, no acid-fast bacilli seen. Tuberculosis-polymerase chain reaction (TB-PCR) was positive. Patient was started on ATT and was asked to review after 2 months of intensive phase of ATT with isoniazid, rifampicin, pyrazinamide, and ethambutol. On follow up patient had symptomatically improved and repeat UGI scopy showed complete resolution of the lesion (Fig. 1). Patient was advised to continue ATT as per the protocol. Patient was completely relieved of the symptoms after 6 months of treatment.

## 3. Discussion

Esophageal tuberculosis is a rare condition, which accounts for 2.8% of all cases of gastrointestinal tuberculosis [1]. Very few cases have been reported, where dysphagia was the commonest symptom. Usually occurs as a result of direct extension of infection from mediastinal nodes, rarely the infection may spread from the lungs or blood stream [1]. Esophageal involvement by tuberculosis usually occurs at the middle third of the esophagus at the level of carina [2], but in our patient the lesion was in the distal esophagus. Clinical, radiological and endoscopic features of esophageal tuberculosis are not well defined because of its rarity and also its close resemblance with other symptomatic esophageal disorders [1]. Approximately 65% of the patients with esophageal tuberculosis have non-specific findings on chest radiograph, however computed tomography of the chest shows characteristic tuberculous lymphadenitis [3]. Histopathology and TB-PCR are the mainstay investigations for confirming the diagnosis of esophageal tuber-

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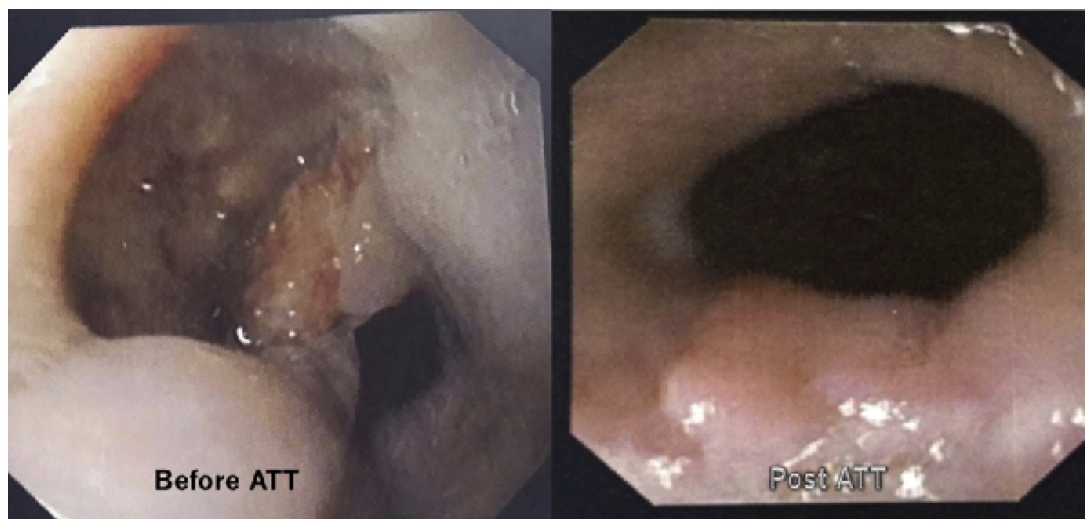


Fig. 1. Upper Gastrointestinal Endoscopy, before and after completing Anti-Tuberculosis Treatment.

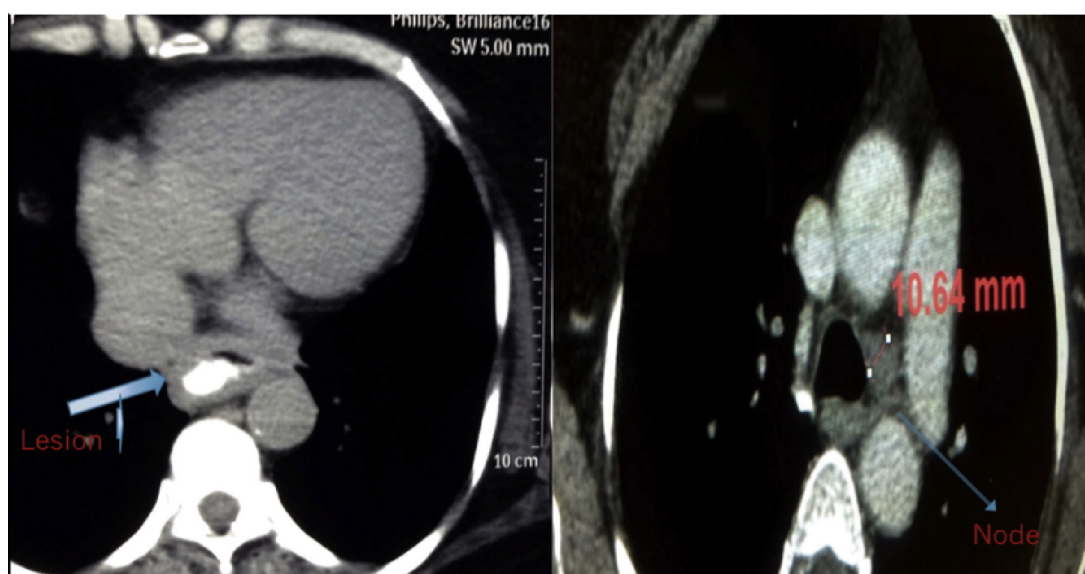


Fig. 2. CECT THORAX (Note the lesion and the enlarged aortopulmonary lymph node with necrosis.).

culosis [4]. Studies show PCR sensitivities ranging from 77% to more than 95% and PCR specificities of >95% for smear-positive specimens [10–13]. However, sensitivities for smear-negative TB patients have been reported to be below 90% [11].

Most of the patients respond well with ATT [4] and require surgery only in cases of fistulas, strictures, and perforations. Esophageal tuberculosis treatment is based on chemotherapy with four drugs (isoniazid, rifampicin, pyrazinamide and ethambutol) in a first phase lasting for two months, followed by a period of four to six months with two drugs (isoniazid and rifampicin). There are cases where treatment was successfully carried out with only three drugs for six months, excluding ethambutol [8,9]. The two most common differential diagnoses are carcinoma of esophagus and Crohn's disease of the esophagus [6,7].

#### 4. Conclusion

Dysphagia is the commonest presenting feature of esophageal tuberculosis and this condition should be considered as a differential diagnosis whenever a lesion is negative for malignancy.

Histopathology and TB-PCR are the key to confirm the diagnosis. Delay in the diagnosis can lead to complications, which might require surgical intervention; otherwise this condition is effectively treated with ATT.

#### Conflicts of interest

None.

#### Funding sources

None.

#### Ethical approval

Single case report not requiring ethical approval.

## Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

## Authors contribution

Vatsal Khanna – writing the paper, data collection.

Abhilash Kumar – study concept.

Naveen Alexander – data interpretation.

Parmasivam Surendran – final editing.

## Guarantors

Dr. Parmasivam Surendran.

Dr. Naveen Alexander.

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