Original Research Paper

Volume - 13 | Issue - 05 | May - 2023 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Radio-Diagnosis

ESOPHAGEAL TUBERCULOSIS: A CASE REPORT

Dr. Abhijeet Shiledar*	Junior Resident Doctor, Department of Radiodiagnosis, Nair Hospital, Mumbai, India. 400008 * Corresponding Author
Dr. Akshay Jaybhaye	Junior Resident Doctor, Department of Radiodiagnosis, Nair Hospital, Mumbai, India. 400008.
Dr. Dev Shetty	Professor and Head Department of Radiodiagnosis, Nair Hospital, Mumbai, India. 400008.
Dr. Tarique Khan	Bonded Assistant Professor, Department of Radiodiagnosis, Nair Hospital, Mumbai, India. 400008

ABSTRACT Esophageal tuberculosis is one of the rare forms of gastrointestinal tuberculosis. Presentation ranges from dysphagia, retrosternal pain to odynophagia. In the present case report, there was no previous history of pulmonary tuberculosis or any signs of active pulmonary tuberculosis. In this elderly patient complaining of dysphagia for a month, the lesion was suggestive of an esophageal carcinoma on imaging as well as on endoscopy causing a diagnostic dilemma. The diagnosis of esophageal tuberculosis was made on endoscopic mucosal biopsy where mycobacterium tuberculosis bacillus was identified. Here the patient was managed with standard anti-tubercle treatment and treated successfully.

KEYWORDS : Esophageal tuberculosis, dysphagia, Radiology; Case Report

Introduction

Esophageal tuberculosis (TB) can be primary or secondary; latter being the more common. This is due to intrinsic protective properties of esophagus. Esophageal TB is often diagnosed late or misdiagnosed as malignancy. Dysphagia is the most common symptom reported; rarely hematemesis and weight loss may be the presenting symptoms. Here we describe an interesting case, where an elderly male was diagnosed with esophageal TB, imitating an esophageal carcinoma on imaging studies.

Case Presentation

A 68 year old male presented with complaints of progressive dysphagia, insidious in onset for both solids and liquids since 2 months associated with loss of appetite (10%) and loss of weight (2kg in 2 months). The patient described mild retrosternal pain as intermittent, dull aching, non-radiating. No history of odynophagia present. Past history was not significant, with no prior hospital admissions. Patient denied any addiction. Family history was not significant, no history of TB contact. On Physical examination, patient was afebrile, the vitals of the patient were within normal limits. Systemic examination was normal. Patient did not report any comorbidities.

Routine investigations were ordered as per the hospital protocol. Electrocardiographic findings were within normal limits. Hematological cell counts were adequate. Chest X-ray was unremarkable, No significant abnormality was detected in bilateral lung fields or mediastinum. Bony thorax and heart size were appropriate. It was decided to go ahead with Contrast enhanced computed tomography (CECT) neck-abdomen-thorax with oral-dynamic study (ODS). CECT revealed asymmetrical circumferential heterogeneously enhancing mural thickening involving the mid-esophagus, extending from D4 to D8 vertebral body level with a craniocaudal length of approx 7.8 cm and maximum thickness of wall being 8mm, suggestive of neoplastic etiology. Fat planes with major vessels and trachea were maintained. Few sub-centimeter sized mediastinal lymph nodes were noted in the sub-carinal, para-tracheal, pre-vascular location, the largest measuring 6 x 7 mm in the left lower para-tracheal region. No evidence of necrotic or enlarged mediastinal nodes was present. Rest of the visualized neck, abdomen and thorax were insignificant. On CT oral-dynamic study diffuse circumferential stricturous narrowing was seen at the level of D4-D5 vertebral body with proximal esophageal dilation and pooling of contrast however thin stream of oral contrast passed through the stricture segment and distal esophagus and stomach were opacified with contrast material. Mucosal irregularity and ulceration was noted. Endoscopy with biopsy and HPE correlation was advised.

On Esophageogastroduodenoscopy stricturous narrowing was noted in mid esophagus 22 cm from upper central incisors with irregular overlying mucosa. Post balloon dilation was done and stricture noted from 22-29 cm from upper central incisors with longitudinal ulcer along posterior wall. Biopsy of mural thickening was obtained, which reported no evidence of malignancy/dysplasia or caseating granuloma. On microbiological study CBNAAT (Cartridge based nucleic acid amplification test) – Mycobacterium tuberculosis was detected.

The patient was started on a standard anti-tubercular regime for 6 months. The patient's symptoms improved within a month. Follow up CT was done after 4 months which revealed significant resolution of the disease.

DISCUSSION

Primary esophageal TB is an extremely rare manifestation of extra pulmonary tuberculosis accounting for only 2.8% of the gastrointestinal tuberculosis cases (1). In our patient there was no past history of pulmonary tuberculosis or evidence of any active or old pulmonary tuberculosis on imaging. As per the literature, dysphagia is the most common presenting complain, however nonspecific symptoms such as odynophagia, retrosternal pain, loss of appetite, loss of weight, aspiration pneumonia may be reported further causing delay in diagnosis and redundant interventions (2). Our patient presented with dysphagia and retrosternal pain.

Routine blood investigations were normal. Chest radiograph did not reveal any significant abnormality (Figure 1). Following X-ray, barium studies and CT scan abdomen-thorax is done to evaluate the cause of dysphagia, another challenge in the diagnosis of esophageal tuberculosis is the nonspecific findings on the imaging including irregular wall thickening, mucosal ulceration, fistula formation and strictures, which mimics esophageal malignancy (3). Likewise, in our case, on CECT abdomen thorax with orodynamic study was performed and revealed asymmetrical circumferential heterogeneously enhancing mural thickening involving the mid-esophagus was noted without any significant mediastinal lymphadenopathy suggestive of neoplastic etiology (Figure 2). The old age of the patient further mislead to the diagnosis of malignancy. There was no evidence of trachea-esophageal fistula or esophageal perforation.

Further endoscopic evaluation revealed long segment stricturous narrowing with longitudinal ulcer involving mid esophagus (Figure 3). The gold standard investigation for this diagnostic dilemma remains the histopathological and microbiological investigations, however the sensitivity of latter is more (4, 5). In this case as well, biopsy from mural thickening was taken which was reported as fragmented esophageal tissue which did not reveal any caseating epithelioid cell

granulomas or malignancy or dysplasia (Figure 4). However on bacteriological study namely CBNAAT, mycobacterium tuberculosis was identified, thus confirming the diagnosis of esophageal tuberculosis.

The mainstay treatment of esophageal tuberculosis is antituberculosis therapy (ATT) for 6 months in immuno-competent patients. Surgical treatment may be considered for the patients with complications such as tracheo-esophageal fistula, hematemesis (6). As per protocol in this patient standard ATT for 6 months was started and symptoms subsided within a month, follow up CECT thorax with ODS was performed after 4 months that revealed decrease in stricturous narrowing and mural thickening.(Figure 5)

Conclusion

Esophageal tuberculosis is very rare but important differential diagnosis in patients complaining dysphagia. It may mimic esophageal carcinoma and Crohn's disease. Contrast enhanced CT scan, OGD scopy followed by biopsy are important tools for diagnosis of esophageal TB. Gold standard for diagnosis of oesophageal TB is made by isolation of tuberculosis bacillus or caseating granulomas either on FNAC or Biopsy. Complete resolution of disease can be done with standard anti-tubercular treatment, and thus prevents further complications and the burden for surgery.

Figure Legends

Figure 1: Chest radiograph posterior-anterior projection revealed no significant abnormality. Lung fields and mediastinum appear normal.

Figure 2: Contrast enhanced computed tomography axial (right) and saggital (left) reconstructed views shows asymmetrical circumferential heterogeneously enhancing mural thickening involving the mid-esophagus, extending from D4 to D8 vertebral body level.

Figure 3: Endocopic images shows stricturous narrowing (left) with longitudinal ulcer (right) involving mid esophagus for a length of 7 cm.

Figure 4: Histopathological evaluation did not reveal any caseating epithelioid cell granulomas or malignancy or dysplasia.

Figure 5: CT-ODS with reconstructed Maximum intensity projection (MIP) images shows

a) Left (Pre-treatment): diffuse circumferential long segment stricturous narrowing of mid oesophagus with proximal pooling of contrast and dilated oesophagus.
b) Right (ATT taken): Follow up scan after 4 months of ATT reveal significant resolution of disease.

FIGURE 1

FIGURE 2

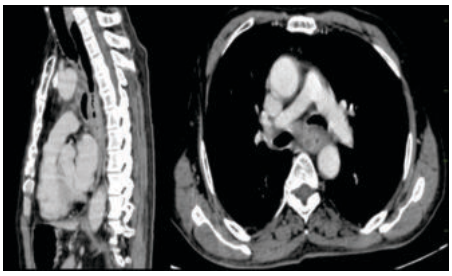


FIGURE 3

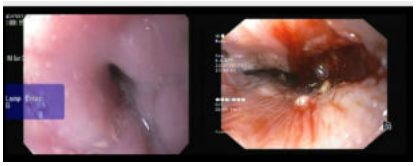


FIGURE 4

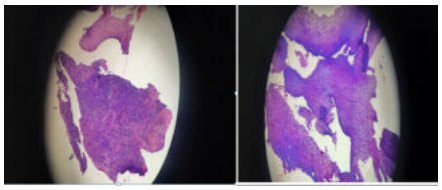
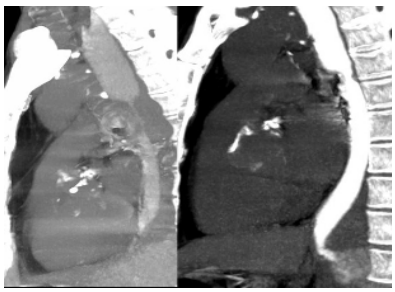


FIGURE 5



Reference

1. Patel N, Amarapurkar D, Agal S, Baijal R, Kulshrestha P, Pramanik S, Gupte P. Gastrointestinal luminal tuberculosis: establishing the diagnosis. Journal of gastroenterology and hepatology. 2004 Nov;19(11):1240-6.
2. Anees A, Singh KD, Khan MA, Khan S. Tubercular esophagocutaneous fistula: A rare case. International Journal of Health & Allied Sciences. 2017 Jan 1;6(1):53-.
3. Pereira JM, Madureira AJ, Vieira A, Ramos I. Abdominal tuberculosis: imaging features. European journal of radiology. 2005 Aug 1;55(2):173-80.
4. Khanna V, Kumar A, Alexander N, Surendran P. A case report on esophageal tuberculosis–a rare entity. International Journal of Surgery Case Reports. 2017 Jan 1;35:41-3.
5. Welzel TM, Kawan T, Bohle W, Richter GM, Bosse A, Zoller WG. An unusual cause of dysphagia: esophageal tuberculosis. J Gastrointestin Liver Dis. 2010 Sep 1;19(3):321-4.
6. Gomes J, Antunes A, Carvalho A, Duarte R. Dysphagia as a manifestation of esophageal tuberculosis: a report of two cases. Journal of Medical Case Reports. 2011 Dec;5:1-5.