Dysphagia from esophageal tuberculosis in a patient with undiagnosed HIV infection

A 57-year-old woman from Ethiopia presented with a 1-month history of dysphagia and odynophagia, with associated decreased appetite and unintentional weight loss. The patient had a remote history of treated pulmonary tuberculosis. The physical examination was unremarkable. An esophagogram revealed diffuse irregularities in the mucosa with ulceration (▶Fig. 1). Laboratory tests revealed pancytopenia, chronic hepatitis B, and HIV infection, with a CD4 cell count of 120 cells/mm3. Computed tomography of the chest and abdomen showed splenomegaly, pulmonary nodules with ground-glass opacities, and esophageal thickening. Esophagogastroduodenoscopy revealed a nodular, inflamed, and aperistaltic esophagus extending from 25 cm to 31 cm from the incisors without any ulcers (▶Fig. 2, ▶Video 1). Multiple tissue samples were sent for histopathological examination and tissue culture. Pathological examination of the esophageal biopsy revealed necrotizing granulomas with negative acid-fast stain (▶Fig. 3). Bronchoalveolar lavage (BAL) was performed for evaluation of ground-glass opacities. Polymerase chain reaction for Mycobacterium tuberculosis (MTB) on esophageal biopsy was positive, and tissue culture from both esophageal biopsy and BAL later grew MTB. The patient was initiated on four-drug antitubercular therapy.

Gastrointestinal tuberculosis most commonly involves the terminal ileum and cecum, with only 0.3% of cases involving the esophagus [1]. Moreover, it is seen in developing countries with a high prevalence of tuberculosis. There are no specific diagnostic endoscopic features, but commonly reported endoscopic features are linear noncircumferential mid-esophageal ulcers with elevated edges [2, 3]. Direct translocation of bacteria from mediastinal involvement is hypothesized and cases of tracheoesophageal fistula have also been reported [4]. Endoscopic ultrasound can also assist to demonstrate infiltration of the esophageal wall by lymph nodes [5]. Our case highlights the rare involvement of the esophagus in tuberculosis, presenting as dysphagia and odynophagia in an immunocompromised host. A high clinical suspicion is required, even if pathology is negative for MTB, especially in patients from countries with a high prevalence of MTB.

Endoscopy_UCTN_Code_CCL_1AB_2AC_3AZ

Competing interests

None

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▶Video 1 Esophagogastroduodenoscopy showing nodular esophageal mucosa in the mid-esophagus from 25 cm to 31 cm from the incisors. It also shows friable mucosa with spontaneous oozing. Also note esophageal thickening and absence of peristalsis.
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DOI https://doi.org/10.1055/s-0043-110667
Published online: 14.6.2017
Endoscopy 2017; 49: E195–E196
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Stuttgart · New York
ISSN 0013-726X

[Fig. 1] Esophagram showing diffuse irregularity of esophageal mucosa with ulceration sparing the distal portion.

[Fig. 2] Esophagogastroduodenoscopy. a Fibrotic and nodular esophagus with a pseudodiverticulum. b Multiple nodules in the upper esophagus.

[Fig. 3] Esophageal biopsy analysis, demonstrating fibromuscular tissue with necrotizing granuloma, consisting of central pyknotic acellular material surrounded by inflammatory infiltrates (hematoxylin and eosin, × 20).

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