

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.

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Competing interests

None

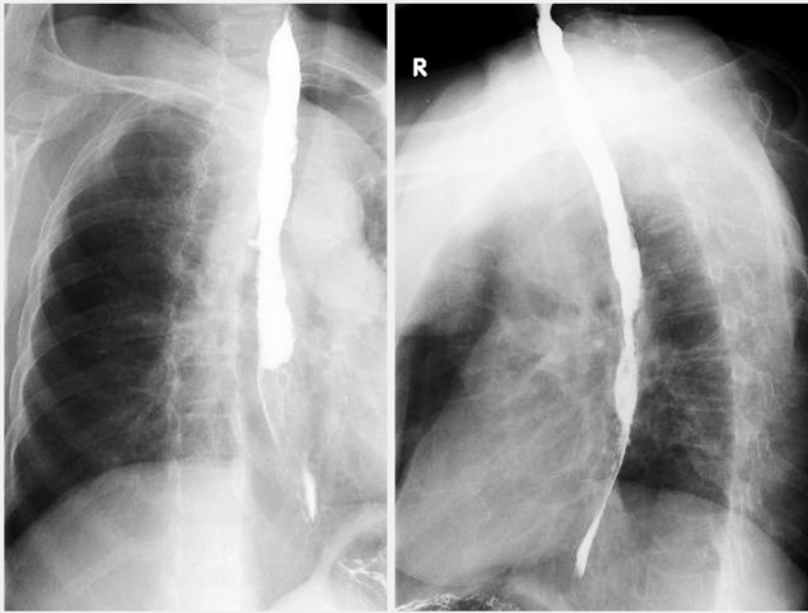
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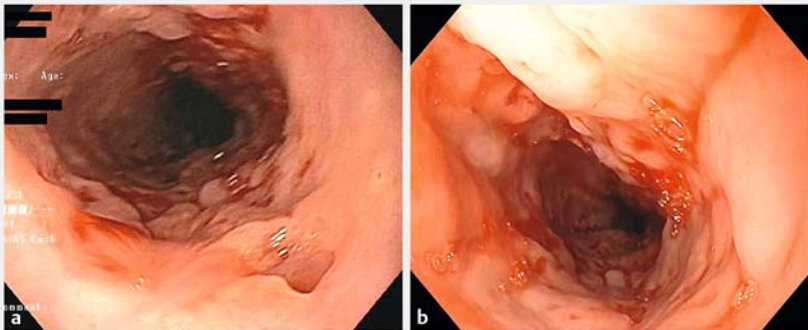
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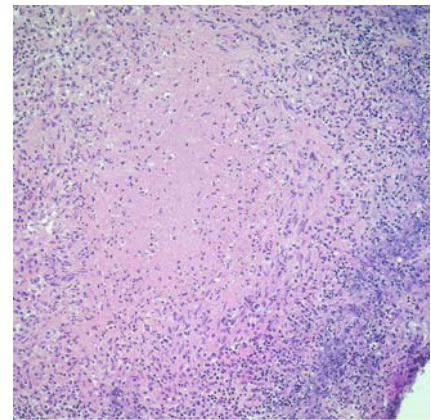
► **Video 1** Esophagogastroduodenoscopy showing nodular esophageal mucosa in the mid-esophagus from 25 cm to 31 cm from the incisors. It also shows friable mucosa with spontaneous oozing. Also note esophageal thickening and absence of peristalsis.



► **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, $\times 20$).

- [3] Park JH, Kim SU, Sohn JW et al. Endoscopic findings and clinical features of esophageal tuberculosis. *Scand J Gastroenterol* 2010; 45: 1269–1272
- [4] Abid S, Jafri W, Hamid S et al. Endoscopic features of esophageal tuberculosis. *Gastrointest Endosc* 2003; 57: 759–762
- [5] Sharma V, Rana SS, Chhabra P et al. Primary esophageal tuberculosis mimicking esophageal cancer with vascular involvement. *Endosc Ultrasound* 2016; 5: 61–62

Bibliography

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References

- [1] Marshall JB. Tuberculosis of the gastrointestinal tract and peritoneum. *Am J Gastroenterol* 1993; 88: 989–999
- [2] Jain SK, Jain S, Jain M et al. Esophageal tuberculosis: is it so rare? Report of 12 cases and review of the literature *Am J Gastroenterol* 2002; 97: 287–291