

# Clinical Quiz

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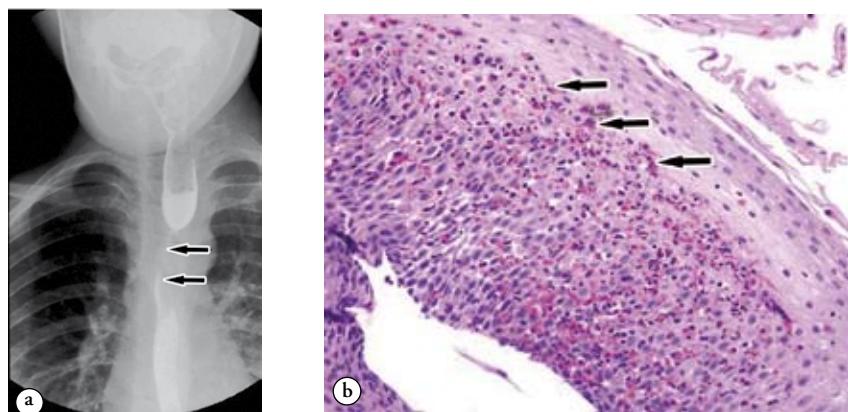
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## A child with dysphagia secondary to abnormal esophageal infiltrations

### Clinical Presentation

A 13-year-old male presented with progressive dysphagia and failure to thrive. He had poor appetite, but no chronic vomiting, or abdominal distension. He was a product of full-term, normal pregnancy. His systemic reviews were unremarkable. There was no ingestion of corrosive injury. His weight and height were both below the fifth percentile for age, otherwise his physical examination was normal. His laboratory findings were normal, except for a peripheral eosinophil count of  $2.1 \times 10^9/l$  (normal range:  $0.1-0.7 \times 10^9/l$ ). An upper gastrointestinal series of barium swallow is shown in Figure 1a. He underwent an esophago-gastroscopy and histopathological biopsy of the esophagus as shown in Figure 1b. This case is presented to describe the diseases featured below as it is an emerging worldwide disease, and recent epidemiologic studies suggest a rising incidence.



**Figure 1** - A image of the patient showing a) upper gastrointestinal series of barium swallow, and b) histopathological biopsy of the esophagus

### Questions

1. Describe the abnormalities in Figures 1a and 1b.
2. What is the diagnosis?
3. What are the common symptoms?
4. What is the treatment option?

## Clinical Quiz

### Answers and Discussion

1. **Abnormalities.** The upper gastrointestinal series of barium swallow in Figure 1a demonstrated that the middle third of the esophagus had a narrow zone at the level of aortic knuckle measuring approximately 2 cm, likely representing esophageal stricture (black arrows). Esophageal biopsy in Figure 1b showed a dense superficial eosinophilic infiltrates in esophageal mucosa. High-powered field (HPF) shows >20 eosinophils, and aggregates of eosinophils (black arrows).
2. **Diagnosis.** The diagnosis is eosinophilic esophagitis (EE). The diagnosis of EE rests on the presence of pan-esophagitis with tissue eosinophilia more than 20 eosinophils per HPF on light microscopy.<sup>1</sup> The etiology of EE is not known. However, EE is a chronic, immune/antigen-mediated disease characterized by an eosinophilic infiltration of esophagus without infiltration in other parts of the gastrointestinal tract.<sup>2</sup>
3. **Symptoms.** Patients with EE present not only with dysphagia and swallowing difficulties, as do adults with the disease, but also with abdominal pain, reflux-like symptoms, heartburn, and poor growth. We have shown in our previous study<sup>3</sup> that failure to thrive and abdominal pain in male, atopic school-aged children was the most common feature of EE.
4. **Treatment.** The most common treatments of EE are dietary therapy (elimination diet and elemental formulas) and topical steroids (swallowed fluticasone and budesonide). Other treatment modalities include proton pump inhibitor, esophageal dilation, and anti-interleukin-5 monoclonal antibody agents.<sup>4</sup>

### References

1. Furuta GT, Liacouras CA, Collins MH, Gupta SK, Justinich C, Putnam PE, et al. Eosinophilic esophagitis in children and adults: a systematic review and consensus recommendations for diagnosis and treatment. *Gastroenterology* 2007; 133: 1342-1363.
2. Liacouras CA, Spergel JM, Ruchelli E, Verma R, Mascarenhas M, Semeao E, et al. Eosinophilic esophagitis: a 10-year experience in 381 children. *Clin Gastroenterol Hepatol* 2005; 3: 1198-1206.
3. Hasosah MY, Sukkar GA, Alsahafi AF, Thabit AO, Fakieh ME, Al-Zahrani DM, et al. Eosinophilic esophagitis in Saudi children: symptoms, histology and endoscopy results. *Saudi J Gastroenterol* 2011; 17: 119-123.
4. Heine RG, Nethercote M, Rosenbaum J, Allen KJ. Emerging management concepts for eosinophilic esophagitis in children. *J Gastroenterol Hepatol* 2011; 26: 1106-1113.