An unusual complication of eosinophilic esophagitis in an adolescent: intramural esophageal dissection

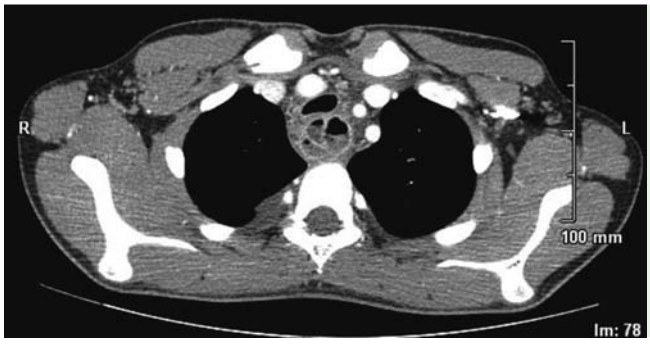

Fig. 1 Computed tomography view at onset of symptoms. Esophageal wall dissection was evident without perforation into the mediastinum.

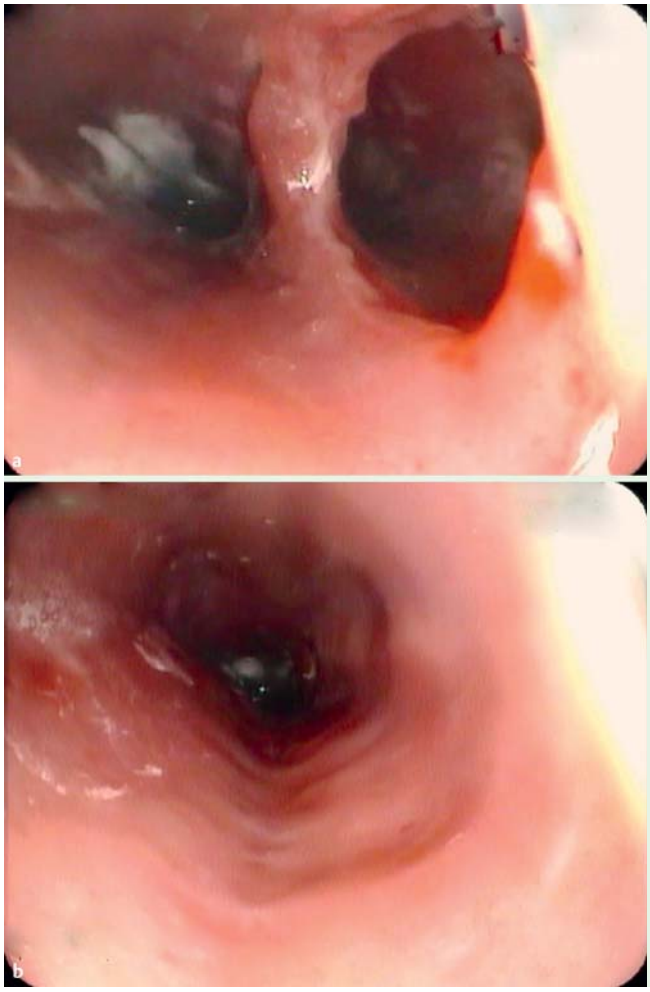

Fig. 2 Endoscopic view at onset of symptoms. **a** Two huge esophageal lesions filled with hematic-purulent material were detected at 25 cm and 33 cm from the dental arcade. **b** Diffusely inflamed fragile mucosa and corrugated esophagus with concentric rings and linear shearing were observed.

Intramural esophageal dissection is a rare complication of eosinophilic esophagitis. Only three cases in adults have been described [1–3]. The residual mucosal septum could be treated with endoscopic section [4,5]. We report on the first pediatric case to be treated conservatively for intramural esophageal dissection due to eosinophilic esophagitis.

A 15-year-old boy who was affected by Klinefelter syndrome presented with acute chest pain, dysphagia, and hematemesis. His past medical history was unremarkable. A computed tomography (CT) scan (▶ **Fig. 1**) and urgent upper endoscopy (▶ **Fig. 2**) were performed. Circumferential dissection of the middle and lower part of the esophageal wall was revealed without evidence of perforation. During endoscopy, a double-lumen naso-esophageal tube was driven into the dissection and mild aspiration was started. This facilitated drainage for 21 days, during which the boy was treated by fasting and total parenteral nutrition support. The boy became asymptomatic in 4 days. After tube removal a new endoscopy was performed, which revealed a healing mucosa but also a false lumen. Esophageal biopsy samples were suspicious for eosinophilic esophagitis (defined as 15 eosinophils per high-powered field). After 20 days the presence of a 9-cm false lumen characterized by slow emptying was confirmed using contrast esophagogram (▶ **Fig. 3**). The patient underwent endoscopic section of the mucosal septum under general anesthesia (▶ **Fig. 4**). Oral feeding was resumed 24 hours after the procedure and the patient was finally discharged after 7 days.

After a month, a control endoscopy showed good epithelialization of the esophageal wall (▶ **Fig. 5**). Biopsies showed the presence of severe eosinophilic esophagitis (eosinophils >20 per high-powered field). Oral steroid treatment and a hypoallergenic diet were started. Follow-up endoscopy at 6 months showed a regular esophageal mucosa and normal histological findings.

In conclusion, intramural esophageal dissection in eosinophilic esophagitis should be treated conservatively if no signs of perforation are present. Endoscopic incision of mucosal septum is a safe and feasible technique to restore normal esophageal anatomy.

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Competing interests: None

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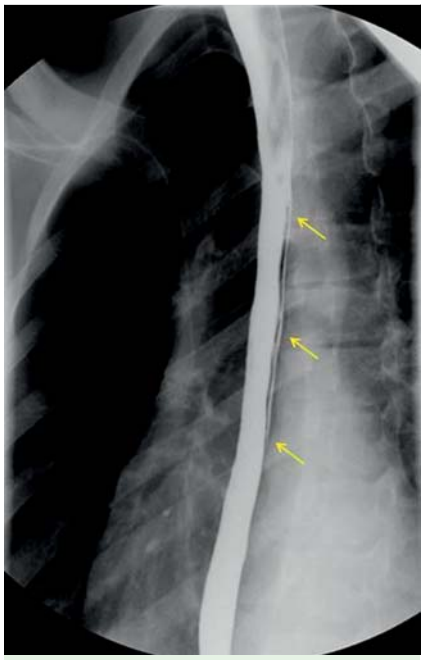

Fig. 3 Contrast esophagogram showing a persistent narrow false lumen (arrows), 2 mm thick and 9 cm long, characterized by very slow emptying.

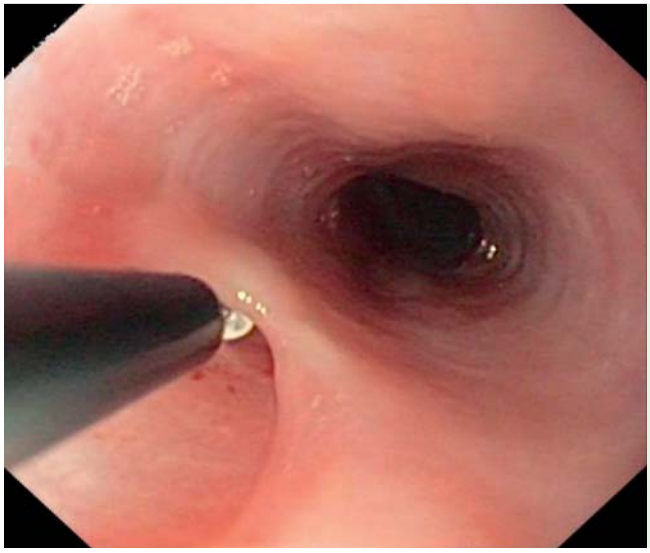

Fig. 4 A diathermic knife was used to incise the mucosal septum between the false and the true lumen, creating a unique esophageal lumen covered by normal mucosa.

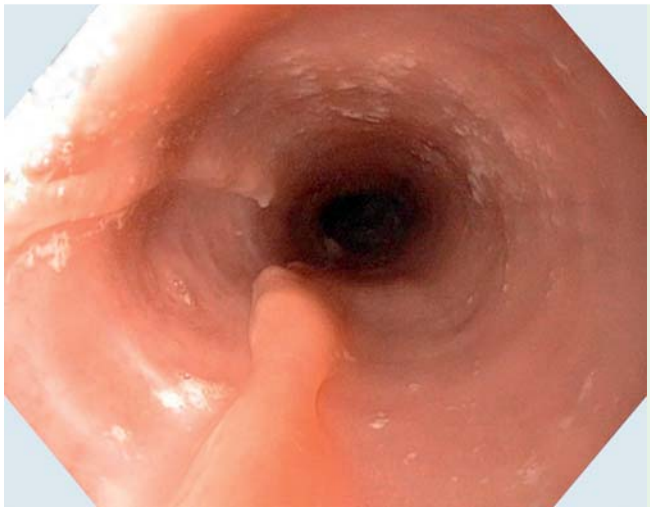

Fig. 5 Esophageal mucosa after the procedure.

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