

Extensive intramural hematoma of the esophagus following endoscopic mucosal resection

Intramural esophageal hematoma (IEH) is a rare but well-recognized endoscopic finding, which forms part of the spectrum of esophageal mucosal injuries [1,2]. It results from disruption of the vasculature within the submucosal plane of the esophageal wall. This leads to dissection of the submucosa by blood, which extends the length of the esophagus and causes intramural expansion and compression of the lumen, resulting in symptoms [1]. The endoscopic appearance is characterized by a distinct, dark bluish mass bulging into the esophageal lumen, which may be localized or diffuse. Although spontaneous IEH is well described [3], reports of iatrogenic causes are uncommon. Procedure-related causes include violent retching during endoscopy, esophageal biopsy, variceal band ligation, sclerotherapy, and dilatation [4–7]. We present the first reported case of IEH following esophageal endoscopic mucosal resection (EMR).

En-bloc EMR was performed using a Duette multiband mucosectomy device (Cook Medical, Winston Salem, North Carolina, USA) on a 15-mm Paris 0-IIa mid-esophageal squamous carcinoma (● Fig. 1 a, b). Initial brisk nonpulsatile bleeding occurred at the resection margin (● Fig. 1 c) and was treated using a snare-tip soft-coagulation technique [8]. Hemostasis appeared to be successfully achieved (● Fig. 1 d, e), but a slowly enlarging, dark blue protrusion of the esophageal wall was then observed, consistent with an IEH that was extending craniocaudally from the mucosal defect (● Fig. 1 f). Minor oozing was observed from the previous treatment point and was controlled with two hemostatic clips (● Fig. 1 f).

Although luminal hemostasis had been achieved, the IEH continued to expand, extending distally to involve the lesser curve of the stomach and obliterating the esophageal lumen. After approxi-

mately 5 minutes, the hematoma stopped expanding, possibly because of tamponade of the bleeding vessel within the submucosal layer.

A computed tomography (CT) scan of the chest was obtained post endoscopy (● Fig. 2). The patient was managed conservatively with analgesia and clear fluids overnight and was eventually discharged 24 hours later, with no further clinical sequelae on follow-up.

Although rare, IEH may occur following EMR. Prompt recognition is vital to avoid potentially unnecessary therapeutic interventions. Treatment is usually conservative, with the majority of cases recovering spontaneously.

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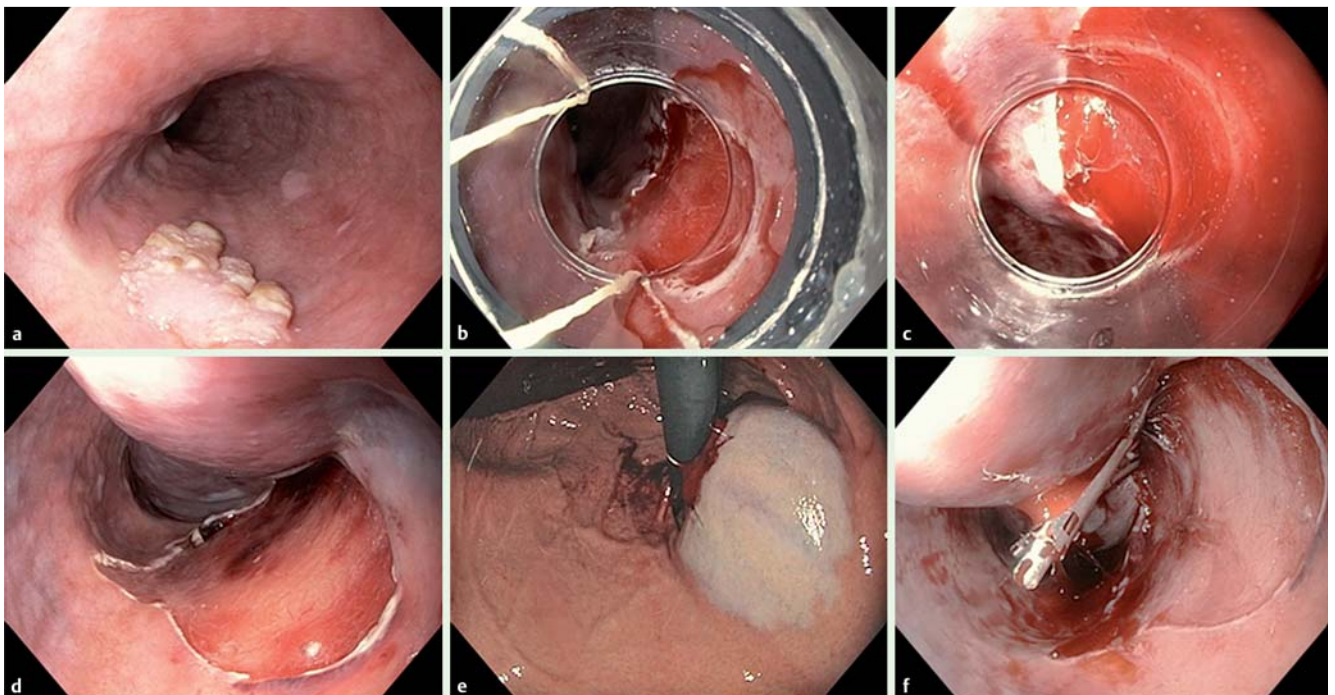


Fig. 1 Endoscopic views of the mid-esophagus showing: **a** a raised 15-mm laterally spreading squamous lesion; **b** a clean mucosal defect with no residual lesion following en-bloc endoscopic mucosal resection (EMR); **c** early brisk bleeding from a single point within the defect; **d** the appearance following successful initial treatment with snare-tip soft coagulation; **e** the developing intramural esophageal hematoma (IEH), which extends intramurally and along the length of the esophagus down to the gastric cardia (retroflexed view); **f** ongoing oozing from the mucosal defect that has been treated by endoscopic clip placement, which has stopped the surface bleeding.

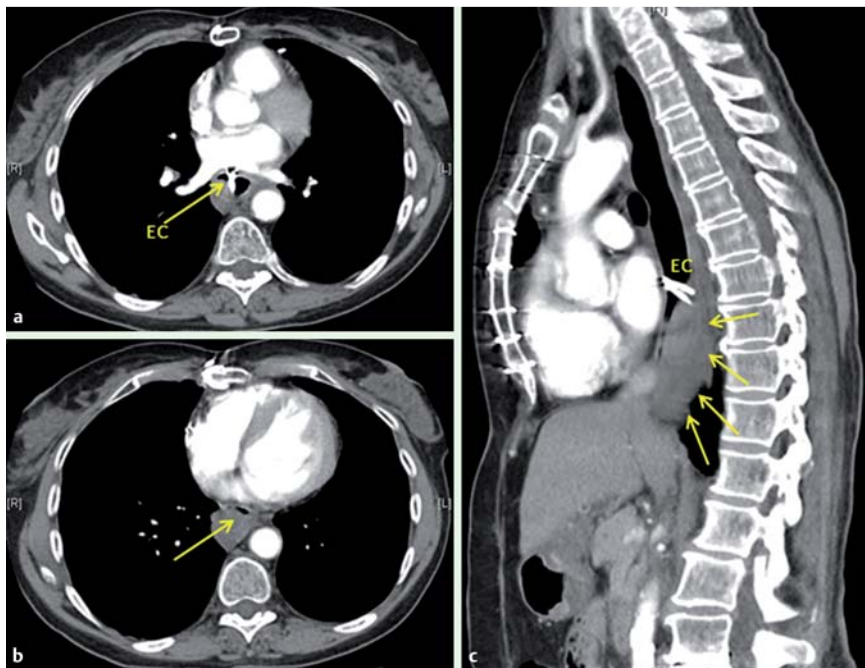


Fig. 2 Contrast-enhanced computed tomography (CT) scan of the chest showing: **a** a high attenuation mass in the proximal esophagus, consistent with an esophageal hematoma, and the overlying endoscopic clip (EC; arrow) in axial view; **b** significant mural thickening of the esophageal wall, as well as a high attenuation mass (arrow) that was extending to the distal esophagus and obliterating the lumen (axial view); **c** extension of the high attenuation mass (arrows) along the mid to distal esophagus (parasagittal view).

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