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IMAGE | ESOPHAGUS

Heterotrophic Ossification of Intercostal Muscle Flap Causing Refractory Esophageal Stricture

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CASE REPORT

A 78-year-old man presented with a history of progressive solid food dysphagia for a few weeks. His history was notable for a recent diagnosis of gastroesophageal junction adenocarcinoma that was treated with Ivor-Lewis esophagectomy, with esophagogastric anastomosis and intercostal muscle flap (IMF) placement for leak and fistula management.

Upper endoscopy showed stenosis of the esophageogastric anastamosis precluding the passage of a diagnostic gastroscope. There was no evidence of tumor recurrence. Balloon dilation was performed using a through-the-scope dilating balloon. The patient underwent multiple dilatations over the next 2 months (every 2 weeks), up to a diameter of 16.5 mm. However, the patient's symptoms recurred rapidly, with evidence of restenosis seen on endoscopy (Figure 1). Computed tomography (CT) showed extrinsic compression and narrowing of the esophageogastric anastomosis caused by heterotrophic ossification of the pedicled IMF (Figure 2). A fully covered esophageal stent was inserted to manage his refractory esophageal stricture. The stent was removed after 6 weeks, followed by rapid recurrence of his symptoms. The patient opted for nonoperative management with serial dilations.

IMFs were initially described by Shenstone for the use in thoracic surgery in 1936.[1] IMFs are used during bronchial or esophageal surgeries to reinforce the anastomosis.[2] They have been used in cases of esophageal perforation related to benign or malignant etiologies.[3] Heterotrophic ossification of IMF is a process of abnormal bony formation of these flaps. This entity has been reported as an incidental finding on imaging. However, bronchial obstruction with resultant pain and infection is well described.[4] The characteristic radiological features seen on CT imaging include discontinuous linear calcification that appears either as a single stripe or two parallel stripes with an average thickness of

Figure 1. Recurrence of the stricture with evidence of ulceration after dilation.

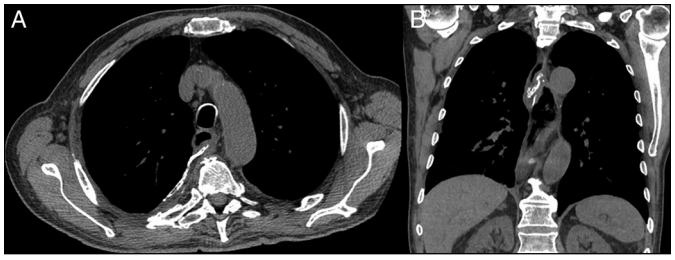

Figure 2. Chest CT showing (A) heterotrophic ossification of the intercostal muscle flap with resultant esophageal luminal narrowing, and (B) heterotrophic ossification of the intercostal muscle flap.

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4 mm (range, 1–8 mm). The radiological changes can be seen as soon as 1 week postoperatively.[5]

DISCLOSURES

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