Esophageal Leiomyoma Presenting as Calcified Esophageal Mass

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CASE REPORT

A 57-year-old man with history of gastroesophageal reflux disease and Barrett’s esophagus, for which he was taking pantoprazole, complained of persistent post-prandial cough. Exam was unremarkable. A chest x-ray showed a 4 x 5 x 5-cm retrocardiac ovoid smoothly margined soft tissue opacity. A computed tomography (CT) scan of the chest with contrast showed a hiatal hernia with a rounded mass containing multiple calcifications and projecting into the lumen (Figure 1). Esophagogastroduodenoscopy (EGD) showed a subtle submucosal bulging within a hiatal hernia sac, and endoscopic ultrasound (EUS) revealed a densely calcified hypoechoic mass that appeared to arise from muscularis propria (Figure 2). A laparoscopic robotic distal paraesophageal mass excision with esophagomyotomy repair was performed. On pathological exam, the mass was consistent with leiomyoma with degenerative changes (Figure 3). Smooth muscle actin immunohistochemistry showed diffuse cytoplasmic reactivity (Figure 4). Immunohistochemistry for S-100 protein and c-Kit were negative, ruling out nerve sheath tumor and gastrointestinal stromal tumor (GIST), respectively. Postoperatively he was discharged home uneventfully.

Leiomyomas are the most common benign esophageal tumors, but the reported incidence is as low as 0.005\%.\(^{1,2}\) However the actual incidence may be higher, as 15–50\% of the cases are asymptomatic.\(^2,3\) Calcification of esophageal tumors, though rare, may be diagnostic of leiomyomas.\(^4\) Leiomyomas are generally discovered incidentally during EGDs. However, if large enough, they may become symptomatic, causing dysphagia, dyspepsia, chest pain, and weight loss.\(^1\) Nonspecific symptoms and slow

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**Figure 1.** Chest CT with contrast (axial view) showing a hiatal hernia with a rounded mass projecting into the lumen with multiple calcifications.

**Figure 2.** EGD revealing a subtle submucosal bulging in the hiatal hernia.
tumor growth can delay the diagnosis. A rounded or lobulated homogeneous mass on chest x-ray, though nonspecific, is often the first sign. On barium swallow, leiomyoma typically appears as rounded convex mass. On EGD, a freely mobile mass with a normal and intact overlying mucosa is usually seen. EUS typically shows an intramural hypoechoic, homogeneous, well-demarcated mass. Magnetic resonance imaging or CT scans generally reveal a rounded or oval mass, but may show calcifications. Biopsy should typically be avoided if the suspicion for leiomyoma is high to avoid scarring that can complicate enucleation. On histological exam, leiomyoma stains positive for desmin and actin, in contrast to GIST, which stains with CD34- and c-kit. It appears as bundles of smooth muscle, with fibrous and neural tissue and low mitotic activity. Surgical enucleation is the mainstay of treatment for large or symptomatic leiomyomas. Resection is generally performed through open thoracotomy or a video-assisted thoracoscopic approach, although robotic techniques may decrease the chance of surgical complications.

**DISCLOSURES**

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**REFERENCES**