Flexible endoscopic Killian-Jamieson diverticulotomy and literature review (with video)

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Killian-Jamieson diverticulum (KJD) protrudes through a muscular gap (Killian-Jamieson triangle) in the anterolateral wall of the cervical esophagus inferior to the cricopharyngeus, superior to the circular muscle of the esophagus and lateral to the longitudinal muscle of the esophagus.[1-4] KJD also has been called the ''lateral cervical esophageal diverticulum'' or ''lateral diverticula from the pharyngoesophageal junction area.''[1-4] KJD arises inferior and lateral to Zenker's diverticulum (ZD).[1-4] KJD can be bilateral in some patients.[3] In addition, KJD and ZD can also coexist in a small number of patients.[3]

The pathogenesis of KJD is unclear. It is likely to be acquired.[4] It has not been shown to be related to reflux esophagitis, peptic stricture, or distal esophageal motility.[3] The diagnosis is established by radiographic evaluation. Surgery is required for symptomatic KJD.[4] We report the first case of flexible endoscopic Killian-Jamieson diverticulotomy (ie, distal vertical diverticulotomy [DVD]), with complete resolution of esophageal symptoms and without any complications.

CASE REPORT

A 51-year-old woman had a 3-month history of daily dysphagia to solid foods, especially bread. She reported a globus sensation posterior to the sternum. The patient denied odynophagia or medical or surgical histories. A

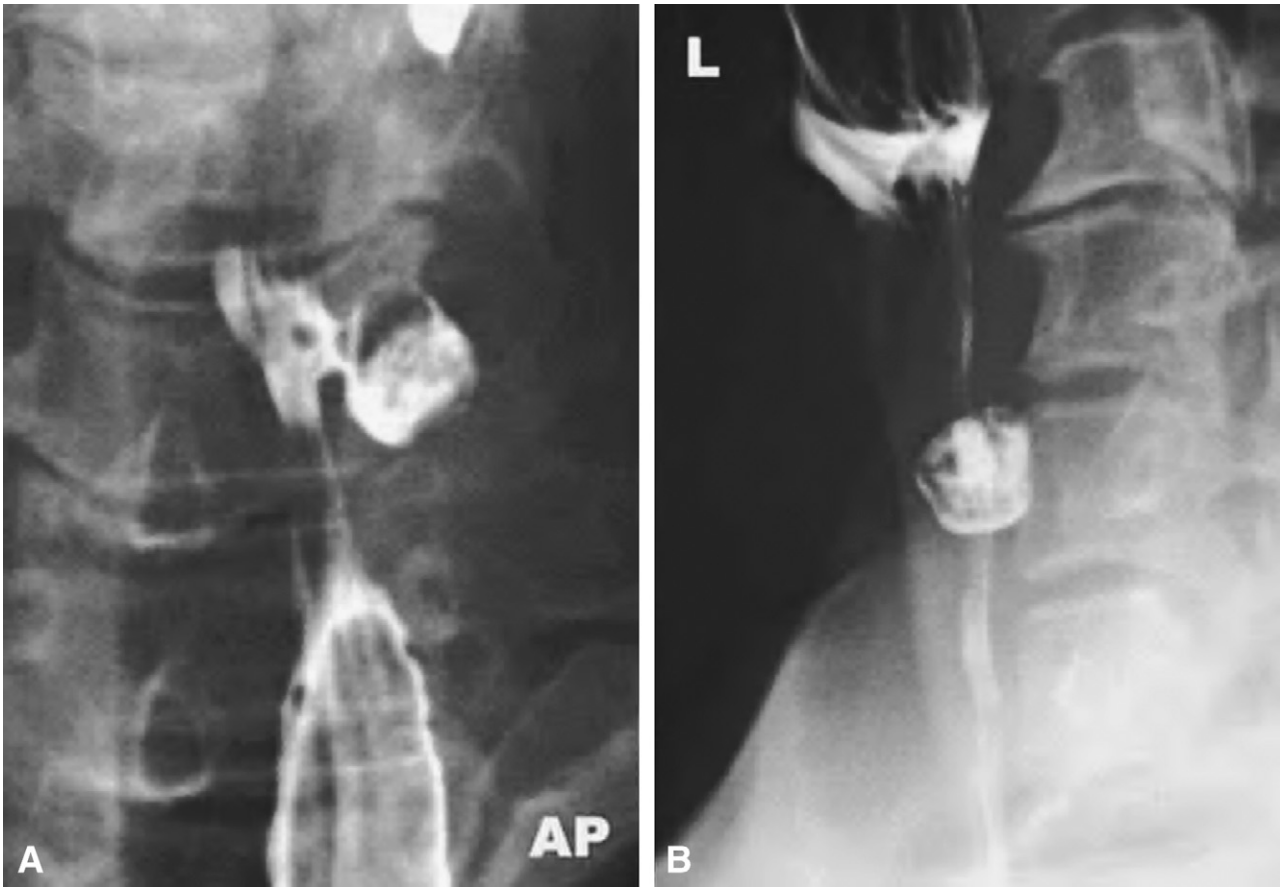

Figure 1. Barium swallow images demonstrating a small- to moderate-sized KJD arising from the lateral cervical esophagus on anteroposterior (**A**) and lateral (**B**) projections. The cervical esophageal lumen is narrowed around the diverticulum, and there is no cricopharygeal bar.

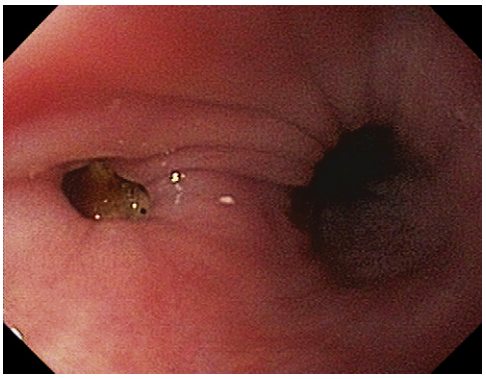

Figure 2. Endoscopic view of the KJD: a narrow-mouthed diverticulum arising from the lateral cervical esophagus without a cricopharyngeal bar.

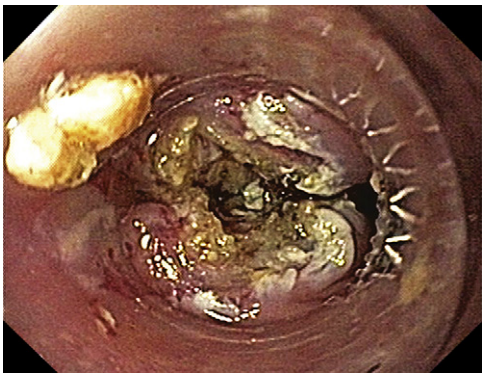

Figure 3. Endoscopic view of the diverticulum after DVD. The food residue drained spontaneously after dissection.

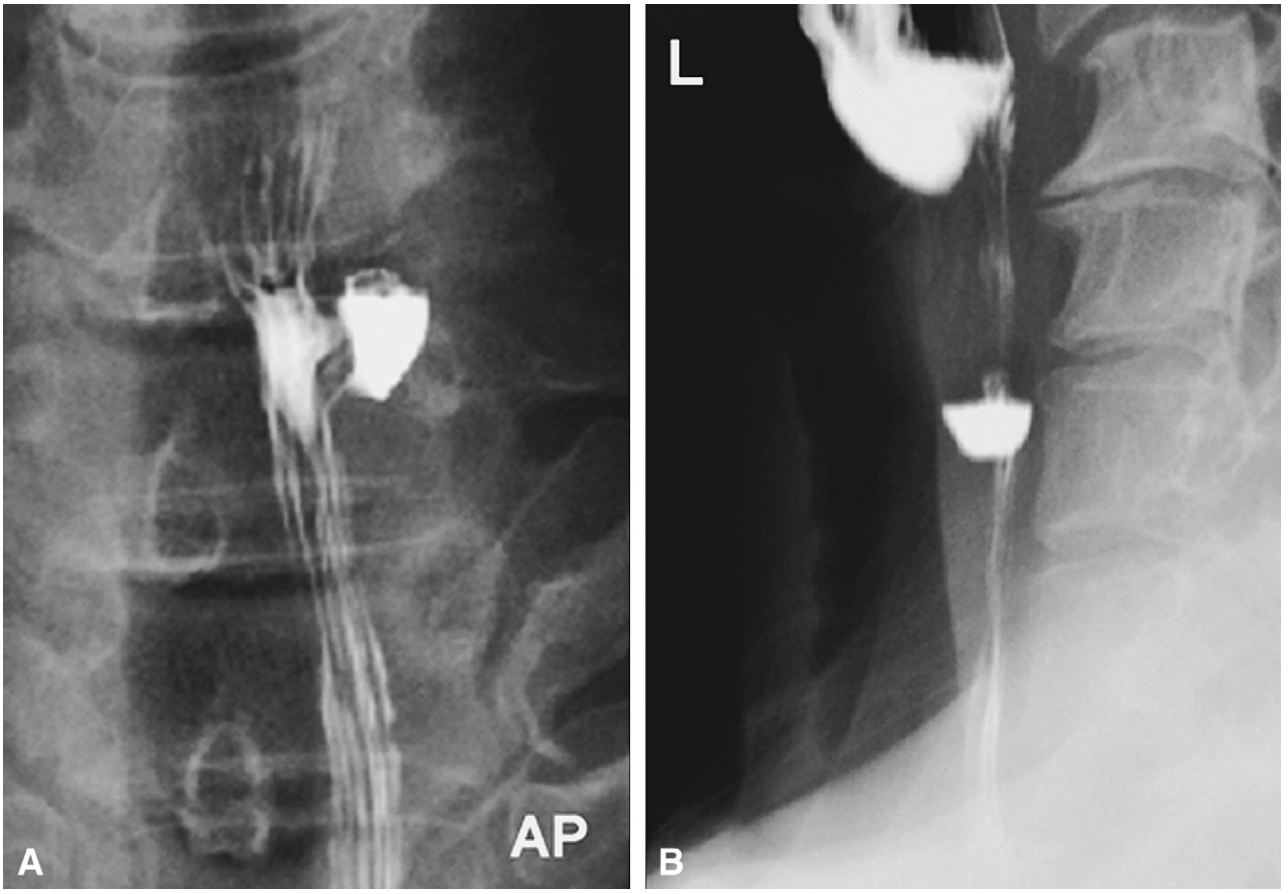

Figure 4. Barium swallow images demonstrating a smaller KJD on anteroposterior **(A)** and lateral **(B)** projections after DVD. The lower diverticular margin disappeared after dissection, and there is no food debris inside the diverticulum.

barium swallow demonstrated a KJD about 2 cm distal to the upper esophageal sphincter (UES) within the left lateral wall of the esophagus (Fig. 1). The craniocaudal size of the diverticulum was estimated to be 15 mm and distal diverticular depth of 10 mm. There was a significant amount of filling defects inside the diverticulum. The patient preferred endoscopic intervention for the KJD. Informed consent was obtained. During endoscopy, the diverticulum was filled with undigested food debris (Fig. 2A and B). With a needle-knife (HPC-3, Wilson-Cook, NC) and pure coagulation current with a setting of 25 watts (ERBE ICC 200/350, Tubingen, Germany), DVD was performed about 10 mm vertically from the diverticular opening (Fig. 3, Video 1, available online at www.giejournal.org). Dissection of the