



Peroral endoscopic myotomy for cricopharyngeal bar

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Background and Aims: Definitive treatment options for refractory dysphagia due to cricopharyngeal bar are limited. We aimed to demonstrate a novel adaptation of peroral endoscopic myotomy to treat this condition (cricopharyngeal peroral endoscopic myotomy [c-POEM]).

Methods: The approach to c-POEM is similar to that in the distal esophagus for the treatment of achalasia. A submucosal injection and overlying mucosal incision are performed, ideally 1.5 to 2 cm upstream of the upper esophageal sphincter, and then a submucosal tunnel is extended beyond the level of the cricopharyngeus. The target muscle is then transected before closure of the mucosotomy.

Results: In 3 cases of refractory cricopharyngeal bar, c-POEM was successfully performed. Although no major adverse events occurred, significant postprocedural edema at the level of the upper esophageal sphincter prolonged hospitalization in 2 of the 3 patients. After recovery, all patients reported complete resolution of dysphagia and tolerated an unrestricted diet.

Conclusions: C-POEM allows reliable and complete muscular division in patients with refractory cricopharyngeal bar who have limited treatment options. (VideoGIE 2020;5:378-9.)

Cricopharyngeal dysfunction, or failure of the cricopharyngeus muscle to relax in response to swallowing, is an uncommon but potentially severe cause of dysphagia that manifests as Zenker's diverticulum or cricopharyngeal bar on contrasted fluoroscopy. In Zenker's diverticulum, the cricopharyngeus forms a septum between the esophageal lumen and the diverticulum, serving as an identifiable target for intraluminal endoscopic and surgical treatment (Fig. 1). In cricopharyngeal bar, the landmarks are less reliable, and thus treatment options are more limited. Endoscopic dilation can be effective, but many patients experience inadequate or transient response. Cricopharyngeal peroral endoscopic myotomy (c-POEM) may represent a viable treatment option.

METHODS

The approach to c-POEM is similar to that in the distal esophagus for the treatment of achalasia. The location of the cricopharyngeus muscle is initially estimated endoscopically. This can be challenging because the muscle is not always apparent and may vary in position relative to the esophageal introitus. A submucosal injection and overlying mucosal incision are performed, ideally 1.5 to 2 cm upstream of the location of the cricopharyngeus. In a manner similar to conventional peroral endoscopic myotomy, the gastroscope is advanced into the expanded submucosa through the mucosotomy; a tunnel is created by sequential

fluid expansion of the space, followed by electrosurgical dissection of submucosal fibers. Once the muscle is fully exposed (Fig. 2), the cricopharyngeus and a small amount of distal muscle are transected using electrocautery. The

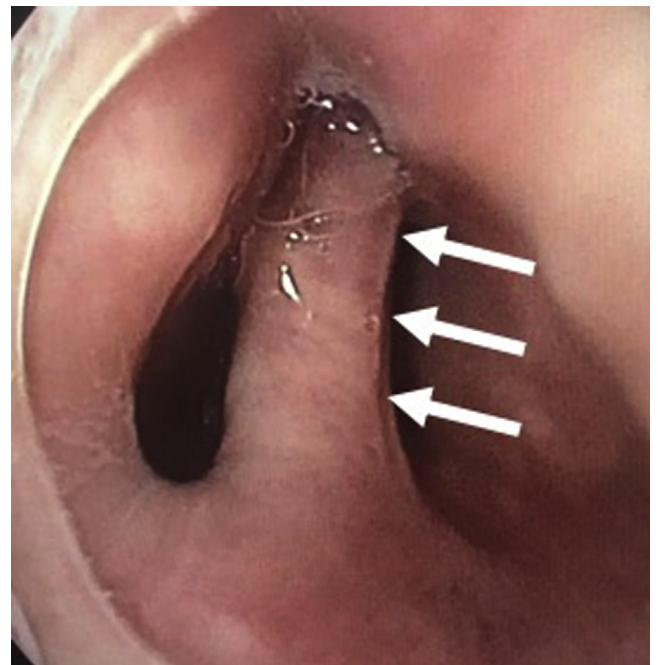


Figure 1. Septum between the diverticulum and true esophageal lumen that serves as a target for therapy in Zenker's diverticulum.

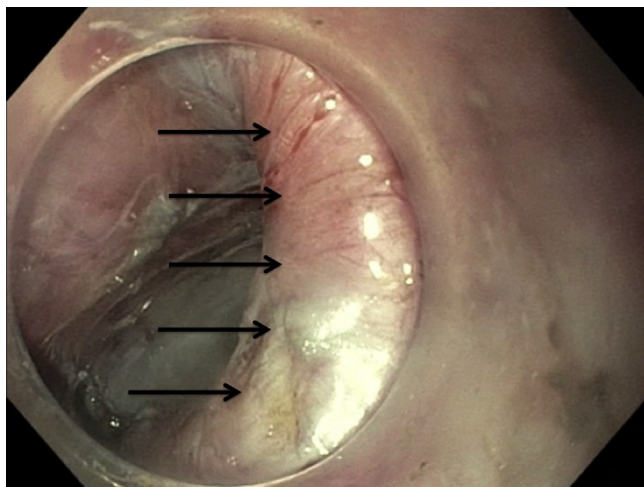


Figure 2. Fully exposed cricopharyngeal muscle.

entry site into the submucosa is then closed using endoscopically deployed clips. The patient is observed in the hospital overnight and undergoes a contrasted esophagram the following morning to exclude a leak. Akin to esophageal peroral endoscopic myotomy, if there is no leak and the patient tolerates a clear liquid diet with adequate pain control, he or she may be discharged on postoperative day 1.

RESULTS

In this video series (Video 1, available online at www.giejournal.org), we present 3 cases of patients between 75 and 83 years of age with multiple medical problems who presented with lifestyle-limiting dysphagia ranging from 2 months to 15 years in duration. All patients had radiographic evidence of a cricopharyngeal bar and had symptoms refractory to endoscopic dilation. Complete cricopharyngeal expo-

sure and division, followed by entry site closure, were successful in all 3 cases. Relative to POEM for Zenker's diverticulum, c-POEM was more technically challenging because of limited working space in the region of the upper esophageal sphincter. Two of the 3 patients developed postprocedural hypopharyngeal edema, requiring a several-day hospitalization for conservative management. After recovery from c-POEM, all patients reported complete resolution of dysphagia and tolerated an unrestricted diet.

CONCLUSION

For patients with refractory cricopharyngeal bar who have limited treatment options, c-POEM allows reliable muscular division and may represent a safe and effective solution for this potentially debilitating and challenging condition.

DISCLOSURES

Dr Elmunzer is a consultant for Takeda Pharmaceuticals. All other authors disclose no financial relationships.

Abbreviation: c-POEM, cricopharyngeal peroral endoscopic myotomy.

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