The treatment of Zenker’s diverticulum has posed significant challenges to the head and neck surgeon since surgical treatment was first described in the 1800s. The diverticulum consists of a pharyngeal mucosal herniation that occurs at Killian’s triangle, a saillent area high in the neck between the inferior pharyngeal constrictors and the cricopharyngeus muscles. Given the location, open surgical procedures risk significant morbidity including mediastinitis, pneumonia, and recurrent laryngeal nerve injury. Mosher first described the endoscopic approach in 1917, but soon abandoned it due to its complications. Dohman and Mattson resurrected the procedure in 1960 with their case series of 100 patients treated with endoscopic esophagodiverticulostomy. However, endoscopic treatment did not enter the mainstream until Scher described the endoscopic staple-assisted esophagodiverticulostomy (ESED) in 1993. Further refined Collard’s procedure by introducing the use of the Weerda bivalved diverticuloscope (Karl Storz, Germany) in 1996. Scher et al found that in their series of 150 cases, patients who underwent ESED had shorter operative times, faster recovery period and lower complications than patients who underwent open procedures. Thus, open diverticulostomy is usually reserved for patients with anatomy preventing proper endoscopic exposure or diverticulostomy possesses concerning characteristics (i.e. large size, persistence, concern for carcinoma).

We review a series of three patients who presented with Zenker’s diverticulum and comitant esophageal stricture. Proper endoscopic exposure was not possible in these patients without first addressing the esophageal stricture. In each case, a two-team approach was implemented. First, the gastroenterologist performed the esophageal dilatation and then the otolaryngologist performed the endoscopic staple-assisted diverticulostomy.

Three patients were surgically treated for Zenker’s diverticulum with esophageal dilatation followed by endoscopic staple assisted esophagodiverticulostomy from April 2005 to August 2009. All patients were women with ages ranging from 86 to 89 years. All patients had a preoperative barium esophagram. Preoperative symptoms included dysphagia, aspiration and regurgitation. There were no immediate postoperative complications related to the procedure. All patients resumed an oral diet within the first 24 hours after surgery and were discharged home on postoperative day one.

Between April 2005 and August 2009, 3 patients were surgically treated for Zenker’s diverticulum with esophageal dilatation followed by ESED. ESED was performed in the manner described by Scher. The Weerda bivalved diverticuloscope (Karl Storz, Germany) was used for simultaneous visualization of the Zenker’s diverticulum and the narrow esophageal inlet. A 0-degree urological endoscope was used to visualize the placement of endoscopic devices. The esophageal lumen was identified by the endoscopist using the endoscopic esophagus lumen finder. Next, a flexible endoscope was performed distal to the esophageal stricture to the stomach by the gastroenterologist using the Olympus GIF-160 esophagoscope (Olympus Corp., Japan) with an 8.6 mm outer diameter. The narrowed esophageal lumen was then dilated by the gastroenterologist using a controlled radial expansion (CRE) wire guided balloon dilator (Boston Scientific, Natick, MA) and Savary-Gilliard dilator (Cook Medical Inc, Bloomington, IN). CRE wire guided balloon dilators of 10 to 18 mm in outer diameter were passed beyond the esophageal stricture and then pulled back into position at the stricture point. Balloons for patients with anatomy preventing proper endoscopic exposure or diverticulostomy possess concerning characteristics (i.e. large size, persistence, concern for carcinoma).

RESULTS

Three patients were surgically treated for Zenker’s diverticulum with esophageal dilatation followed by endoscopic staple assisted esophagodiverticulostomy from April 2005 to August 2009. All patients were women with ages ranging from 86 to 89 years. All patients had a preoperative barium esophagram. Preoperative symptoms included dysphagia, aspiration, and regurgitation. There were no immediate postoperative complications related to the procedure. All patients resumed an oral diet within the first 24 hours after surgery and were discharged home on postoperative day one.

METHODS

Three patients were surgically treated for Zenker’s diverticulum with esophageal dilatation followed by endoscopic staple assisted esophagodiverticulostomy. ESED was performed in the manner described by Scher. The Weerda bivalved diverticuloscope (Karl Storz, Germany) was used for simultaneous visualization of the Zenker’s diverticulum and the narrow esophageal inlet. A 0-degree urological endoscope was used to visualize the placement of endoscopic devices. The esophageal lumen was identified by the endoscopist using the endoscopic esophagus lumen finder. Next, a flexible endoscope was performed distal to the esophageal stricture to the stomach by the gastroenterologist using the Olympus GIF-160 esophagoscope (Olympus Corp., Japan) with an 8.6 mm outer diameter. The narrowed esophageal lumen was then dilated by the gastroenterologist using a controlled radial expansion (CRE) wire guided balloon dilator (Boston Scientific, Natick, MA) and Savary-Gilliard dilator (Cook Medical Inc, Bloomington, IN). CRE wire guided balloon dilators of 10 to 18 mm in outer diameter were passed beyond the esophageal stricture and then pulled back into position at the stricture point. Balloons for patients with anatomy preventing proper endoscopic exposure or diverticulostomy possess concerning characteristics (i.e. large size, persistence, concern for carcinoma).

REFERENCES