Low-cost modified endoscopic vacuum therapy using a triple-lumen tube allows nutrition and drainage for treatment of an early post–bariatric surgery leak

Leaks after laparoscopic sleeve gastrectomy (LSG) occur in up to 5% of patients, with mortality rates approaching 4% [1]. Among available therapies for leaks after bariatric surgery, endoscopic approaches have been shown to be safe and effective. Tissue sealants, cap-mounted clips, suturing, stents, a cardiac septal defect occluder, septotomy, endoscopic internal drainage with double pigtails, and endoscopic vacuum therapy (EVT) are the forefront of the therapeutic endoscopic arsenal [2, 3]. However, an individualized approach is needed to determine the best endoscopic treatment strategy for a given patient. In this video, we describe the successful treatment of a LSG leak using low-cost modified EVT.

A 30-year-old woman with class II obesity developed fever, nausea, and abdominal pain 14 days after LSG. Computed tomographic scan revealed a leak associated with a small contained collection adjacent to the staple line of the proximal stomach (angle of His). Underwater esophagogastroduodenoscopy was performed without air insufflation to avoid disrupting the collection (Fig. 1). The patient was treated with modified EVT using widely available triple-lumen tubing to allow for nutrition using the jejunal tube and EVT using the fenestrated portion of the tube (Video 1). The procedure was well tolerated and the patient remained on enteral nutrition as well as taking a liquid diet on the day following the procedure. External drainage was not required. After 15 days, imaging demonstrated resolution of the leak (Video 2), and the modified EVT system was removed (Fig. 3).

In summary, endoscopic drainage with this low-cost, modified EVT is a highly effective and safe technique for leaks [4, 5]. Furthermore, EVT obviates the need for external drainage and employs widely available materials. Ultimately, this low-cost modified EVT allows for nutrition and drainage with a single tube through the nares, enabling decreased procedure times, longer periods between EVT system exchanges, and fewer adverse events.

Video 1 Low-cost modified endoscopic vacuum therapy with a triple-lumen tube.

Fig. 1 Underwater endoscopic visualization of the sleeve leak.

Video 2 Fluoroscopic imaging confirmed the success of leak treatment with the low-cost modified endoscopic vacuum therapy (EVT) system and demonstrated a significant improvement in the sleeve stenosis.

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Competing interests

The authors declare that they have no conflict of interest.

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