Closure of a cervical esophageal perforation with an over-the-scope clip

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Iatrogenic perforation occurring during an endoscopic procedure is a challenging situation, requiring in many instances a surgical intervention. Endoclips are currently used to manage gastrointestinal tract perforations but have limitations, including a restricted opening distance between the jaws and a weak closure force, which diminishes the ability to capture the two edges of a perforation [1]. The over-the-scope clip (OTSC) system (Ovesco Endoscopy AG, Tübingen, Germany) is designed to create full-thickness closure by means of teeth arranged in the shape of a bear trap, and it has a simple method of application. Our group has shown the effectiveness of OTSC clips in closing perforations throughout the gastrointestinal tract [2].

A 58-year-old woman, affected by type 2 diabetes and vasculopathy and with a femoropopliteal bypass and left toe amputation, was admitted to our emergency department at the end of December 2014 for septic shock due to a *Candida* species infection. In January 2015, during the creation of a tracheotomy with the Fantoni maneuver [3], the anterior wall of her cervical esophagus was perforated. The patient was referred to our endoscopy unit immediately after the adverse event. Esophagogastroduodenoscopy (EGD), performed while the patient was under deep sedation with 1% propofol (B. Braun Medical, Melsungen, Germany), showed an esophageal perforation 9 mm in diameter

Video 1

Application of a 9-mm-diameter/6-mm-depth traumatic over-the-scope clip (OTSC) to close an iatrogenic esophageal perforation in a 58-year-old woman, sustained during a tracheostomy.

located 1 cm under the upper esophageal sphincter. A 9-mm-diameter/6-mm-depth traumatic OTSC was then applied, by suction alone, to close the defect (▶ **Video 1**). A radiograph obtained immediately after the OTSC placement showed the absence of contrast medium outside the esophageal lumen, and EGD 2 months later documented engagement of the OTSC into the cervical esophageal wall. The patient was asymptomatic and no longer presented with dysphagia.

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