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Endoscopic Treatment of Benign Esophageal Fistulas Using Fully-covered Metallic Esophageal Stents

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Abstract
Non-malignant esophageal fistulas have a wide spectrum of clinical and pathological features and it`s important to learn to detect and treat them, due to significant morbidity, mortality and costs. The need for minimally invasive, efficient and also quick procedures is imperative. Esophageal stenting using fully-covered expandable stents has become an increasingly preferred option and addresses to fistulas which arise from 2-3 cm beyond Killian's mouth and up to the gastro-esophageal junction. The long-term purpose of the procedure is closure of the fistula and thus healing. A second goal would be avoiding the complications generated by long-term wearing of the stent, such as gastrointestinal perforation and stenosis.
Objectives: This review focuses on the efficacy of fully-covered metallic stents in treating benign esophageal fistulas. To this effect, we performed a retrospective study on 21 patients admitted in our clinic between January 2014 and April 2017 for non-malignant esophageal fistulas. The selection criteria were the following: post-operative fistulas (gastric sleeve, fundoplication for transhiatal gastric hernia, even malignancies for which surgical tumor removal was performed), foreign body acquired fistulas, post-traumatic fistulas. Esophago-jejunal anastomotic fistulas were also included in the study (following complete gastrectomy).
Results: The efficacy of esophageal stenting was proven in 76% of the cases, resulting in fistula closure. The rest of the patients either didn't achieve fistula closure or couldn't tolerate the stent, calling for early removal of the prosthesis. Reintervention procedures such as stent repositioning or stent replacement (with higher diameter) were carried out in 42% of the cases. A percentage of 19% of the patients who achieved fistula closure developed esophageal stricture on stent-induced ulcers and needed recalibration stenting or esophageal Savary dilation. 22% of the cases needed surgical drainage for infected collections developed simultaneously. We recorded 2 deaths, unrelated to the stenting procedure. Patients who didn't acquire fistula closure were referred to thoracic surgery in good physical condition.
Conclusions: Fully-covered metallic esophageal stents can be successfully used to treat benign esophageal fistulas. Follow-up of the patient in order to see if stent repositioning or replacement is needed is crucial. Special design esophageal stents are highly recommended and must not lack. Close cooperation with thoracic surgery is indispensable.
Key words: benign esophageal fistula, SEMS, fully covered esophageal stent