

## ***Stent placement for benign esophageal strictures***

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### **“Story from the Front Lines”**

A man in his 60s with a history of laryngeal carcinoma status post remote radiation therapy and total laryngectomy complicated by benign esophageal strictures requiring frequent endoscopic dilation, was admitted for observation after placement of an expandable esophageal stent. He initially did well, with no complaints other than an inability to phonate. Otolaryngology was consulted, and informed the patient that given his trachea-esophageal prosthesis (TEP) anatomy, any esophageal stent would block airflow through his stoma and therefore preclude phonation. During his hospitalization, he developed a fever and COPD exacerbation. During a coughing spell, he dislodged his stent and had it removed at the bedside. Subsequently, the patient was discharged.

### **“Teachable Moment”**

Benign esophageal strictures negatively affect quality of life and may lead to complications such as malnutrition, weight loss, and aspiration. Causes of strictures range from caustic ingestion to chronic reflux to radiotherapy. Endoscopic dilation is the initial treatment of choice, but severe esophageal strictures may be refractory to repeated dilation.<sup>1</sup> Stenting with metal, plastic, or biodegradable stents has been proposed as an alternative treatment to reduce dysphagia associated with strictures. The invasiveness of stenting is considered to be in-between endoscopic dilation and surgery with gastric pull-through or enteral replacement.

Stenting, whether temporary or permanent, is associated with two major complications. First, stent migration occurs in 20-25% of patients and while most prevalent for metal stents,<sup>2</sup> may also be observed with plastic stents. Second, given that stents may only be placed temporarily, esophageal strictures may recur after stent retrieval. Given its variable success, stenting is not used on a regular basis in patient with benign esophageal strictures, particularly when complication rates for endoscopic dilations is low.<sup>3</sup>

Little evidence informs the optimal use of stenting in patients with a TEP. In conversations with the patient and specialty consultants, it became apparent that the patient was not informed that loss of phonation would result from stent placement. While the patient’s post-procedural fever and stent migration were unpredictable complications from his hospitalization, his loss of phonation could have been anticipated prior to stent placement. The patient had been frustrated with dozens of repeat endoscopic dilations and may have opted for a trial of stent placement despite the risks of stent migration. However, phonation was critically important to him, and he would have declined the procedure in real time had he known that loss of phonation was a predictable consequence of stent placement. Therefore, in this situation, stent placement was a case of overuse secondary to preference misdiagnosis.

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<sup>1</sup> Repici et al. Temporary placement of an expandable polyester silicone-covered stent for treatment of refractory benign esophageal strictures. *Gastrointestinal Endoscopy* (2004).

<sup>2</sup> Kim et al. Temporary metallic stent placement in the treatment of refractory benign esophageal strictures: results and factors associated with outcome in 55 patients. *Interventional Radiology* (2008).

<sup>3</sup> Piotet et al. Esophageal and pharyngeal strictures: report on 1,862 endoscopic dilatations using the Savary-Gilliard technique. *Eur Arch Otorhinolaryngol* (2008).