Novel use of a self-expanding metal stent for an esophageal stricture after radiofrequency ablation treatment of Barrett's esophagus

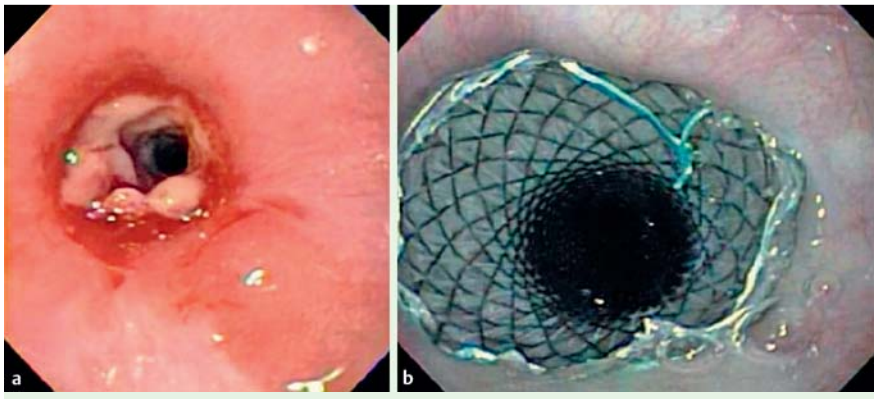

Fig. 1 Endoscopic images showing: **a** a tight stricture with circumferential ulceration at the proximal end of the area of Barrett's epithelium that had been treated by radiofrequency ablation (RFA); **b** a fully covered metal esophageal stent deployed in the esophagus.

Fig. 2 Radiographic image following injection of contrast showing a waist in the mid-portion of the stent, with free flow of contrast into the stomach.

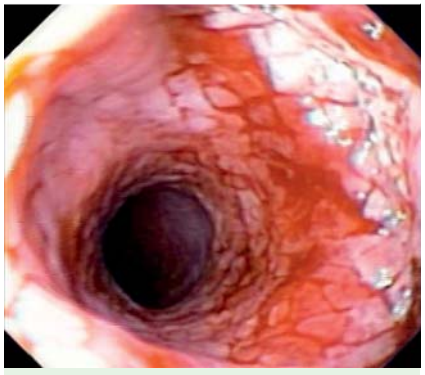

Fig. 3 Endoscopic view of the esophagus following removal of the stent 2 months later.

Fig. 4 The fully covered, 23×105-mm, esophageal self-expanding metal stent (SEMS).

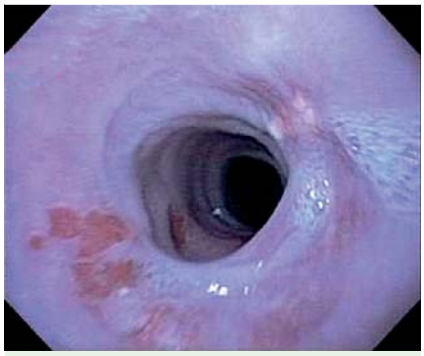

Fig. 5 Endoscopic appearance 6 months later showing a well-healed fibrotic stricture.

Radiofrequency ablation (RFA) is effective and safe in the treatment of Barrett's esophagus [1]. The incidence of esophageal stricture after RFA treatment is reported to be up to 8% [2]. Stricture rates may be increased with RFA of long-segment Barrett's esophagus. Strictures are treated endoscopically with balloons or Savary dilators; however, there is a risk of perforation with these treatments. We report on the successful treatment of a patient with a stricture following RFA using a self-expanding metal stent (SEMS).

A 71-year old man with long-segment Barrett's esophagus (C7M7) and low-grade dysplasia underwent circumferential RFA. A month later he reported dysphagia and odynophagia, and endoscopy revealed a tight stricture with circumferential ulceration at the proximal end of the RFA-treated area of Barrett's epithelium (**Fig. 1a**).

A gastroscope with a 5.9-mm diameter was advanced to the proximal end of the stricture; however, the distal end of the stricture could not be traversed. A gastroscope with an 8.8-mm diameter was therefore inserted and a 9 – 12-mm extraction balloon (Extractor Pro RX; Boston Scientific, Natick, Massachusetts, USA) was introduced. Injection of contrast revealed a 4 – 5 cm long stricture in the mid-esophagus. A stent introducer was passed over a 450-cm, 0.035-inch guidewire (Dreamwire; Boston Scientific), which had been passed through the stricture under fluoroscopic guidance. A fully covered metal esophageal stent (23×105 mm,

WallFlex; Boston Scientific) was deployed (**Fig. 1 b**). A further attempt to pass the 5.9 mm gastroscope through the stricture was unsuccessful. The extraction balloon was reintroduced and injection of contrast showed a waist in the mid-portion of the stent, but with free flow of contrast into the stomach (**Fig. 2**).

The stent was removed 2 months later (**Fig. 3** and **Fig. 4**) and after 6 months, the patient had no symptoms of dysphagia and was found to have a well-healed fibrotic stricture on endoscopy (**Fig. 5**).

To our knowledge, this is the first case of an esophageal stricture occurring after RFA that was successfully treated by placement of a fully covered removable metal stent. Use of a self-expandable metal stent has also been reported for a stricture occurring after photodynamic therapy for Barrett's esophagus [3]. Treatment of tight strictures with metal stents may be a cost-effective treatment as it avoids the need for repeated dilations and the possible subsequent complications [4].

Endoscopy_UCTN_Code_CPL_1AH_2AJ

Competing interests: None

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References

1 *Shaheen N, Sharma P, Overholt B* et al. Radiofrequency ablation in Barrett's esophagus with dysplasia. N Engl J Med 2009; 360: 2277 – 2288
2 *Garman K, Shaheen N*. Ablative therapies for Barrett's esophagus. Curr Gastroenterol Rep 2011; 13: 226 – 239
3 *Cheon YK*. Metal stenting to resolve post-photodynamic therapy stricture in early esophageal cancer. World J Gastroenterol 2011; 17: 1379 – 1382
4 *Van Halsema E, Wong Kee Song L, Baron T* et al. Safety of endoscopic removal of self-expandable stents after treatment of benign esophageal diseases. Gastrointest Endosc 2013; 77: 18 – 28

Bibliography
DOI http://dx.doi.org/10.1055/s-0034-1365428
Endoscopy 2014; 46: E269–E270

ISSN 0013-726X

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