Radiofrequency ablation of Barrett’s esophagus using an overtube

We report on the use of an overtube and thin enteroscope to perform radiofrequency ablation (RFA) using the HALO® system (BARRX Medical, Sunnyvale, California, USA) in a 73-year-old man who had undergone radiotherapy to a head and neck squamous cell carcinoma and distal esophagectomy for adenocarcinoma of the esophagus (Ivor Lewis operation). He still had Barrett’s epithelium present in the remaining esophagus with tongues extending 4 cm proximally to the anastomosis. Histology revealed low grade dysplasia. As a result of the previous radiation therapy, his proximal esophagus was tortuous, stiffened, and partially stenotic. However, it was possible to pass a regular endoscope (GIF-E160; Olympus, Tokyo, Japan) and the HALO360 device. An initial ablation scope (GIF-E160; Olympus, Tokyo, Japan) was fed into the overtube, which is bridging the curves and strictures. In addition, the distal part of the overtube is soft and tapered. Once the overtube had passed the stricture and esophageal kink, the scope and inner overtube were removed.

As the standard gastroscope (9.8 mm outer diameter) loaded with the HALO60 device could not be advanced into the overtube, we elected to use a smaller diameter enteroscope (EN-450T5; Fujifilm, Tokyo, Japan). Because of its narrower outer diameter (9.4 mm) passage of this scope with the loaded HALO60 device was feasible (Fig. 1) and RFA was effectively applied (Fig. 2).

An effective ablation of the remaining Barrett’s epithelium was mandatory in this patient with a history of esophageal adenocarcinoma [1–3]. The challenges of delivering therapy were overcome by adapting to the difficult anatomy using other available instruments, such as the overtube and a thinner endoscope. The presence of the overtube allowed us to easily negotiate the tortuous, kinked, and stenotic esophagus.

We anticipate that more patients who require RFA for Barrett’s epithelium but who have difficult esophageal anatomy will be encountered in the future. These include patients with problems such as esophageal stenosis, diverticuli, and pharyngeal pouches. Although delivery of RFA can be accomplished with the smaller HALO60 device, the device is not widely available, and it may still not be possible to pass it through a tortuous and stenotic esophagus. Thus, we believe that the use of an overtube represents a viable solution to allow RFA to be performed using the various HALO devices.

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Competing interests: None

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References

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