

Treatment of recurrent esophageal stricture with an insulated-tip electro-surgical knife and mitomycin C

An 82-year-old woman presented with dysphagia due to a refractory esophageal stricture. The stricture was thought to have been caused 2 years previously after hospitalization for a hip fracture and prolonged nasogastric tube placement at a subacute care facility. Numerous attempts at stricture dilation, initially every 2 weeks, had been made at another institution using a hydrostatic balloon and an esophageal stent, which was later removed because of complications.

At our center, the patient underwent upper gastrointestinal (GI) endoscopy under general anesthesia, during which a severe benign-appearing intrinsic stenosis (4-mm wide and 1-cm long) that prohibited passage of the endoscope was encountered 31 cm from the incisors (► **Video 1**). The stenosis was incised using an insulated-tip electro-surgical knife along the aspect opposite to the aorta. Balloon dilation was performed to a diameter of 15 mm before the stenosis was traversed and a 4-cm hiatus hernia was noted. The remainder of the upper GI endoscopy was normal.

Repeat balloon dilation to 15 mm was then performed. The upper GI endoscope was removed and an overtube was advanced to the level of the stricture to minimize mucosal contact with mitomycin C. A gauze soaked with 1 mL of mitomycin C solution (0.4 mg/mL) was delivered to the level of stricture with a rat-toothed forceps that was fed through the endoscope (► **Fig. 1**). The gauze was applied to the level of the stenosis for 3 minutes and this was followed by a second 2-minute treatment.

The patient was discharged home on a full liquid diet for 2 days followed by soft diet for 2 days. She was seen in clinic 7 months later with no recurrent symptoms.



► **Fig. 1** Direct application of a gauze soaked with mitomycin C to the level of the stricture after insulated-tip electro-surgical knife incision had been performed.

Esophageal stricture due to prolonged nasogastric tube placement has been previously reported [1]. Data on the use of topical mitomycin C for esophageal strictures are limited, but similar techniques have been shown to be safe and effective in children with strictures due to caustic injury or after repair of esophageal atresia [2–5].

► VIDEO 1



► **Video 1:** Identification of an esophageal stricture, which was treated with balloon dilation, insulated-tip electro-surgical knife incision, and application of mitomycin C.

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Competing interests

C.C. Thompson is a consultant for Boston Scientific and Olympus.

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