

# BougieCap Dilation in Eosinophilic Esophagitis for Stricture Treatment under Visual and Haptic Control

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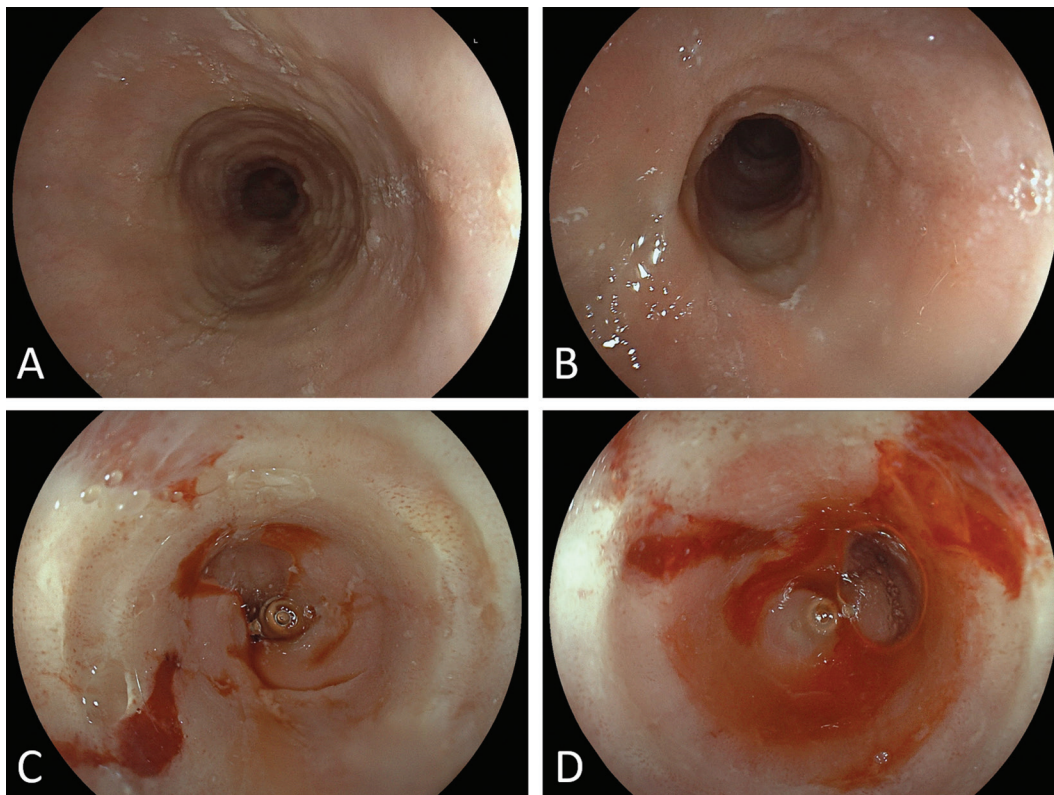
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A 51-year-old male with a recently established diagnosis of stricturing eosinophilic esophagitis (EoE) under anti-inflammatory treatment with orodispersible budesonide 1-mg bid presented for esophageal stricture treatment due to persistent dysphagia. The recent (“subacute”) esophago-gastroduodenoscopy (EGD) indicated discrete EoE stigmata, such as edema with reduced vascular pattern, discrete linear furrows, and rings (►Fig. 1A), as well as a hardly passable stricture of an estimated 2-cm axial length in the distal esophagus (►Fig. 1B), summing up to an endoscopic

reference score (EREFS) of 5 points. The patient underwent esophageal dilation without fluoroscopy using a 12- and 14-mm BougieCap (Ovesco Endoscopy, Tübingen, Germany) as an innovative novel endoscopy accessory for stricture treatment under visual and haptic control.<sup>1</sup> During slow and judicious increases in forward forces within the stricture with marked circumferential mucosal whitening reflective of tissue traction, mucosal lacerations and tears at 7 and 11 o'clock (►Fig. 1C) and later on at 1 o'clock became visible. (►Fig. 1D) The further clinical course was uncomplicated,



**Fig. 1** (A) Endoscopic image of the midesophagus illustrating signs of eosinophilic esophagitis (EoE) with reduced vascular pattern, discrete linear furrows, and rings, as well as (B) an estimated 2-cm stricture in the distal esophagus (EREFS score 5). (C) BougieCap dilation procedure with circumferential mucosal whitening reflective of tissue traction and minor mucosal lacerations at 7 and 11 o'clock. (D) Later stage of the procedure highlighting a larger tear at 1 o'clock.



**Fig. 2** The BougieCap device slipped on and being taped to the end of an upper endoscope.

and the patient underwent another dilation session 6 weeks apart up to 16 mm with durable clinical and endoscopic response (►**Video 1**; available in the online version).

The BougieCap, as a radiolucent single-use, dome-shaped transparent cap of different available sizes from 7 to 16 mm, is attached to the scope tip. (►**Fig. 2**) Bougienage is by gently advancing the endoscopy through the stricture under ancillary rotational movements under both endoscopic and haptic control. Whether or not a guidewire used for BougieCap dilation is at the discretion of the operator. In our endoscopy practice, guidewire assistance is implemented for high-grade and/or proximal strictures. In addition, we suggest using a guidewire in the first procedures of individual operators during the learning curve. Preliminary experience in real-world use and a recent systematic study have established its overall safety in endoscopy practice with “the lost cap” being a signature, albeit mostly innocuous complication.<sup>2</sup> Whether or not its use translates into improved safety in esophageal dilation in the high-risk population of EoE patients, notorious for oftentimes impressive mucosal tears, and postdilation chest pain awaits further research.<sup>3</sup>

#### Financial Disclosure

The author discloses no financial relationships relevant to this publication.

#### Video 1

BougieCap dilation in eosinophilic esophagitis for stricture treatment under visual and haptic control. Online content including video sequences viewable at: <https://www.thieme-connect.com/products/ejournals/html/doi/10.1055/s-0040-1716586>.

#### Conflict of Interest

The author states no conflict of interest.

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