

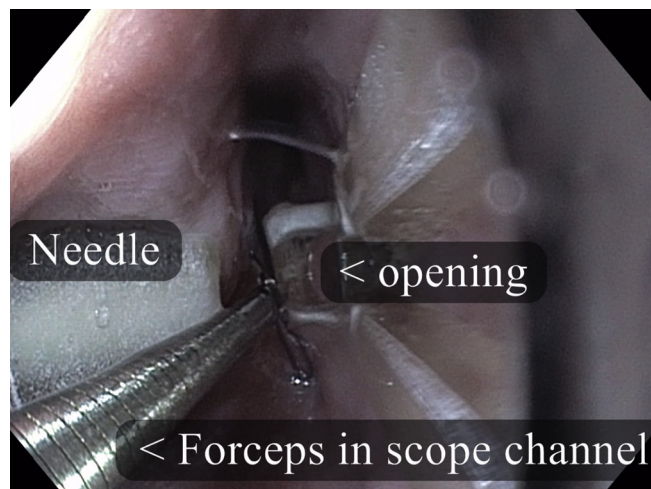
## Treatment of an epiphrenic diverticulum

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Epiphrenic diverticulum is a rare condition. The prevalence across the population is between 0.2% and 0.8%.<sup>1</sup> Symptoms are due to the diverticulum itself or to associated motility disorders. The most frequent symptoms are dysphagia, regurgitation, epigastric pain, halitosis, vomiting, and weight loss.<sup>2</sup> The treatment, diverticulectomy, is surgical, with a left thoracic route. The mortality associated with surgery ranges from 0% to 11% and adverse events from 0% to 37%.<sup>3,4</sup> A transoral endoscopic approach could dramatically simplify the therapeutic approach. The use of magnets has been reported to be promising, but they are not yet commercially available.<sup>5</sup>

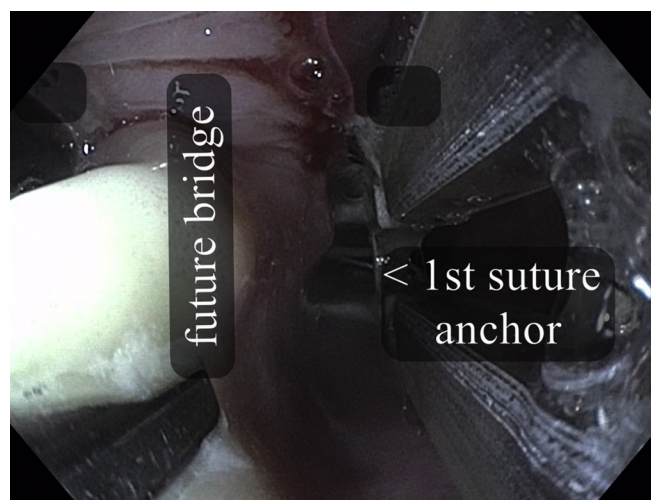
In this video case report (Video 1, available online at [www.VideoGIE.org](http://www.VideoGIE.org)), we describe the use of the Endomina to treat an epiphrenic diverticulum. The Endomina triangulation platform (Endotools SA, Gosselies, Belgium) is Comformité Européenne marked for endoluminal suturing and was used to perform endoscopic full-thickness suturing. We use another version of the Endomina with a 35°-angled needle and a smaller diameter to be able to move in the nar-



**Figure 2.** Endomina inside the diverticulum; lumen of the esophagus on top. First step: to appose the T Tag between the bottom of the diverticulum and the lumen of the esophagus.



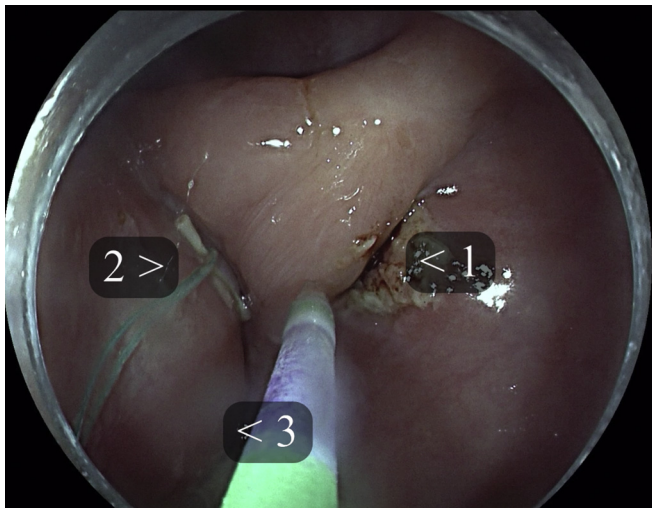
**Figure 1.** View of barium swallow showing the epiphrenic diverticulum.



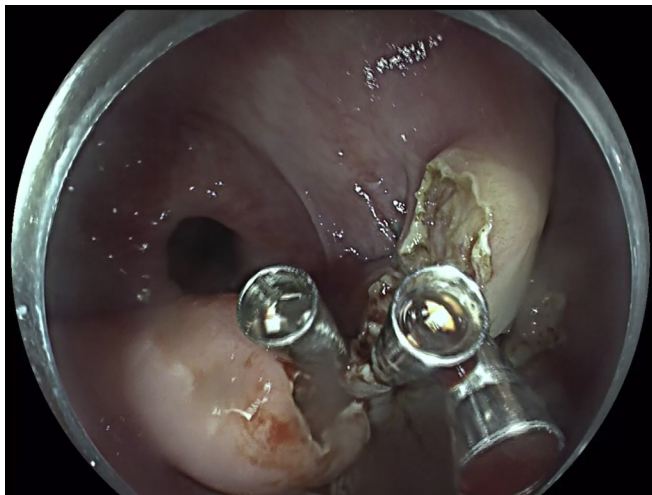
**Figure 3.** Delivery of the first Tag inside the lumen of the esophagus.

row lumen of the esophagus. The idea is to ensure tissue apposition between the bottom of the diverticulum and the esophagus before cutting the bridge in between.

A 55-year-old woman presented with a 6-cm epiphrenic diverticulum (Fig. 1). Her symptoms were dysphagia for solid food and epigastric pain. Manometry did not reveal



**Figure 4.** Two weeks after placement of 3 sutures between the bottom of the diverticulum and the esophageal lumen.



**Figure 5.** Final result after cutting the bridge and placing hemoclips.

any abnormality. After the Endomina was introduced over guidewires, the device was placed across the diverticulum (Fig. 2). Once the top of the arm was in the bottom of the diverticulum, a first piercing was done through the esophageal lumen (Fig. 3).

A first Tag was released into the esophagus and the other at the bottom of the diverticulum. Those steps were repeated 3 times to ensure good tissue apposition. After a healing period of 2 weeks, the septum was cut with a needle-knife (Endoflex, Voerde, Germany) with setting Endocut I, effect 2, interval 2, cutting 100 W, coagulation 40 W (Fig. 4). At the end of the procedure, hemoclips (Instinct clips; Cook Medical, Bloomington, Ind, USA) were placed to secure the cutting line and to avoid potential delayed bleeding (Fig. 5).

The patient was discharged the next day and instructed to maintain a liquid diet for 3 days, followed by a normal diet, and follow-up showed the disappearance of symptoms and no recurrence at 2 months. This case report suggests that treatment of an epiphrenic diverticulum by use of this suturing platform is safe and effective.

## DISCLOSURE

*Dr Huberty, Dr Blero, and Dr Deviere are shareholders in EndoTools Therapeutics.*

## REFERENCES

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