

# Gastric Plication



Nitin Kumar, MD

## KEYWORDS

- Endoscopic sleeve gastroplasty • Primary obesity surgery endolumenal
- Articulating Endoscopic Circular stapler

## KEY POINTS

- Gastric plication, like all endoscopic bariatric therapies, should be delivered in the context of a multidisciplinary weight management program.
- Endoscopic sleeve gastroplasty has demonstrated efficacy and is entering clinical practice.
- Primary obesity surgery endolumenal has shown efficacy and is under review by the US Food and Drug Administration.
- The Articulating Endoscopic Circular (ACE) stapler and TransOral Gastroplasty system (TOGa) can also be used to perform gastric plication, although commercial status is uncertain.
- As with medical or surgical weight loss techniques, it is important to continue long-term clinical weight management to maintain weight loss.

## INTRODUCTION

More than 81 million Americans have obesity, and more Americans are overweight.<sup>1</sup> Diet and lifestyle management programs are limited in effectiveness by physiologic responses, and despite their wide availability, the prevalence of obesity has grown markedly in recent decades.<sup>2</sup> Medications that show moderate efficacy have recently been approved by the US Food and Drug Administration (FDA). Effective therapies, such as bariatric surgery, have not been used broadly because of concerns about invasiveness and limited access because of coverage restrictions.<sup>3</sup>

Endoscopic therapies for obesity can fill the efficacy, invasiveness, and availability gap between conservative measures and bariatric surgery. Various endoscopic bariatric therapies act on the stomach, small intestine, or both. Their mechanisms of action may be analogous to bariatric surgeries, for example, gastric restriction or intestinal bypass. Others, such as aspiration therapy, use mechanisms not seen in bariatric surgery. One restrictive technique is gastric plication. One current endoscopic technique for gastric plication is endoscopic sleeve gastroplasty (ESG). In its

---

Disclosure Statement: The author is a consultant for Obalon.  
Bariatric Endoscopy Institute, 1450 W Lake Street, Suite 101, Addison, IL 60101, USA  
E-mail address: [nkumar@obesityendoscopy.org](mailto:nkumar@obesityendoscopy.org)

Gastrointest Endoscopy Clin N Am 27 (2017) 257–265  
<http://dx.doi.org/10.1016/j.giec.2016.12.003>  
1052-5157/17/© 2017 Elsevier Inc. All rights reserved.

[giendo.theclinics.com](http://giendo.theclinics.com)

contemporary form, this procedure uses endoscopic suturing to remodel all or part of the stomach into a tubular sleeve, reducing both gastric volume and accommodation ability and perhaps affecting gastric motility (Fig. 1). Other techniques have also been studied. Two techniques use staplers—transoral gastroplasty (TOGa; Satiety Inc, Palo Alto, CA) and the Articulating Endoscopic Circular (ACE; Boston Scientific Corporation, Natick, MA) stapler. Another, under review by the FDA, uses the Incisionless Operating Platform (IOP; USGI Medical, San Clemente, CA) to perform the primary obesity surgery endolumenal (POSE).

## ENDOLUMINAL VERTICAL GASTROPLASTY

Endoscopic suturing has evolved over time. The first endoscopic treatment of obesity using endoscopic suturing was for revision of Roux-en-Y gastric bypass, using the Bard EndoCinch (Davol, Murray Hill, NJ), a suction-based suturing device originally intended for endoscopic treatment of gastroesophageal reflux disease.<sup>4,5</sup> The EndoCinch was then applied for the primary treatment of obesity, by performing endoluminal vertical gastroplasty, an analogue of a bariatric surgery called *vertical banded gastroplasty*.<sup>6</sup>

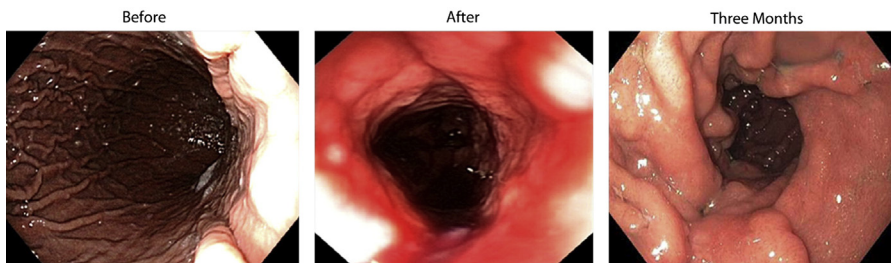
## ENDOSCOPIC SLEEVE GASTROPLASTY

### *Superficial Thickness Suturing*

A subsequent iteration of the EndoCinch, the RESTORe endoscopic suturing device (Davol) was used to perform the first endoscopic sleeve gastroplasty. RESTORe could perform deeper-thickness suturing than the EndoCinch and did not need to be removed and reinserted for suture reloading. ESG was performed in the TRIM trial, with placement of an average of 6 plications to approximate the anterior and posterior walls of the stomach. The prospective TRIM trial performed at 2 centers included 18 subjects.<sup>7</sup> The subjects lost  $27.7\% \pm 21.9\%$  of their excess weight ( $11.0 \pm 10$  kg). Waist circumference decreased by  $12.6 \pm 9.5$  cm. However, endoscopic follow-up found that suture placement was not durable.

### *Full-Thickness Suturing*

The OverStitch (Apollo Endosurgery, Austin, TX) has made full-thickness endoscopic suturing possible. The device can rapidly place full-thickness sutures in several configurations, including interrupted and running stitches. It can be reloaded without removal and reinsertion. The device has an actuating handle, which attaches to the endoscope handle, and a needle driver, which attaches to the endoscope tip. At



**Fig. 1.** Formation of endoscopic sleeve. (From Abu Dayyeh BK, Rajan E, Gostout CJ. Endoscopic sleeve gastroplasty: a potential endoscopic alternative to surgical sleeve gastroplasty for treatment of obesity. *Gastrointest Endosc* 2013;78(3):534; with permission.)

Download English Version:

<https://daneshyari.com/en/article/5659974>

Download Persian Version:

<https://daneshyari.com/article/5659974>

[Daneshyari.com](https://daneshyari.com)