Technical aspects of endoscopic sleeve gastroplasty

Figure 1. **A**, Endoscopic view showing argon plasma coagulation markings on anterior wall, greater curvature, and posterior wall. **B**, The tissue helix is used to facilitate full-thickness bites. **C**, Endoscopic view demonstrating the release of the T-tag on completion of the suture pattern. **D**, The cinch allows the suture to be cut and the suture position to be maintained. **E**, The new smaller lumen is beginning to form as shown at the top right of the image. **F**, Endoscopic view demonstrating gastric sleeve on completion of the procedure. **G**, Endoscopic view showing the residual fundus that remained on completion of the procedure.

Of the currently available endoscopic bariatric options in the United States, endoscopic sleeve gastroplasty (ESG) appears to be the most effective and durable. However, it is highly operator dependent. In ESG, the volume of the stomach is reduced by approximately 70% through the creation of a small-diameter sleeve along the lesser curvature of the stomach by use of an endoscopic suturing device (OverStitch, Apollo Endosurgery, Austin, Tex). We present a case that demonstrates important technical aspects of the ESG procedure.

A 35-year-old woman with a body mass index (BMI) of 34 kg/m² who had not been able to lose weight by conventional obesity management underwent an ESG (Video 1, available online at www.VideoGIE.org). A total of 6 to 8 plications were performed to reduce the gastric cavity in its long axis and to provide a tubular or sleeve-shaped gastric restriction (Figs. 1A-D). Using this technique, we created a gastric sleeve with the anterior wall, greater curvature, and posterior wall, having the lesser curvature as a dome (Figs. 1E-G). Clinical review at 24 weeks revealed that the patient had lost 20% of her total body weight (from 179 lbs to 145 lbs). Her BMI was reduced from 34 kg/m² to 28 kg/m².

DISCLOSURE

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Sindhu Barola, MBBS, Yen-I Chen, MD, Saowanee Ngamruengphong, MD, Anthony N. Kalloo, MD, Mouen A. Khashab, MD, Vivek Kumbhari, MD, Department of Medicine, Division of Gastroenterology and Hepatology, The Johns Hopkins Medical Institutions, Baltimore, Maryland, USA

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Written transcript of the video audio is available online at www.VideoGIE.org.