Endoscopic Sleeve Gastroplasty Significantly Reduces Body Mass Index and Metabolic Complications in Obese Patients

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Purpose:
ESG is an incisionless, minimally invasive bariatric procedure that reduces the length and width of the gastric cavity to facilitate weight loss. We performed a prospective study to evaluate the effects of ESG on TBWL and obesity-related comorbidities.

Methods:
• Collected data on 91 consecutive patients undergoing ESG
• All procedures were performed using a cap-based flexible endoscopic suturing system to facilitate triangular pattern of sutures to imbricate the greater curvature of the stomach.
• Patients were evaluated at 6 mo (n=73), 12 mo (n=53), 24 mo (n=12)
• Secondary outcomes: evaluated effects of ESG on metabolic factors and safety

Study Criteria:
• All patients had a BMI greater than 30 kg/m² and failed noninvasive WL measures or had a BMI greater than 40 kg/m² and were not considered good surgical candidates or refused surgery.

Results:
• 91 subjects with baseline BMI of 40.7±7 kg/m²
• Metrics were evaluated at 6 months, 12 months and 24 months:
  • 14.4% TBWL at 6 mo 80% follow-up
  • 17.6% TBWL at 12 months with 76% follow-up
  • 20.9% TBWL at 24 months with 66% follow-up
• Statistically significant improvements in A1c (p=.01), systolic blood pressure (p=.02), waist circumference (p<.001), alanine aminotransferase (p<.001), and serum triglycerides (p=.02)

Adverse Events:
• 1 serious adverse event: perigastric leak occurred that was managed non-operatively.

Conclusion:
ESG is a minimally invasive and effective endoscopic WL intervention. In addition to sustained TBWL up to 24 months, ESG reduced markers of hypertension, diabetes, and hypertriglyceridemia.

Key Points:
1. %TBWL was 20.9% at 24 months
2. Statistical improvements in A1c, systolic blood pressure, and hypertriglyceridemia.
3. 1 serious adverse event (perigastric leak) in 92 patients – managed non-operatively.

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