Endoscopic Sleeve Gastroplasty for Obesity: Multicenter Study 248 Patients w 24mo Follow-Up

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Purpose:
The aim is to evaluate long-term outcomes, reproducibility, and predictors of weight response in large multicenter cohort. Moreover, determine if EBT's can mimic anatomical alterations similar to surgical procedures but offer an intuitive alternative at lower costs, safe and efficient alternative.

Methods:
- Prospective, multicenter interventional cohort study (3 surgical centers) of 248 patients
- Endoscopic placement of sutures in the body of the stomach starting at the incisura to reduce the volume of the stomach.
- Patients were evaluated at 6mo, 12mo, 18mo, 24mo

Study Criteria:
- Patients were considered for the study if they hit the 6 month mark post-ESG

Results:
- 248 subjects: 73% were female, with baseline BMI of 37.8 ± 5.6kg/m²
- Metrics were evaluated at 6 months and 24 months:
    - 15.17% TBWL at 6 mo 84.6% of subjects achieved ≥ 30% EWL (P < 0.0001), with 65.0% mean EWL
    - 18.6% TBWL at 24 months
    - 13% of patients were lost to follow-up at 6 months
    - 33% of patients were lost to follow-up at 24 mo
- 92 patients qualified for 24 month evaluation

Adverse Events:
- 5 patients (2%) had serious AE's:
    - 2 perigastric inflammatory fluid collections (adjacent to the fundus) resolved with percutaneous drainage & antibiotics,
    - 1 self-limited extra-gastric hemorrhage requiring blood transfusion,
    - 1 PE 72 hr post-procedure,
    - 1 pneumoperitoneum and pneumothorax requiring chest tube.
    - *All recovered without surgical intervention.*

Effectiveness:
- Long-term clinical success was defined as achieving ≥10% TBWL at 24 months
- Predictors of high patient responder and success was noted at 6 months – patients achieving ≥10% TBWL at 6 months were able to achieve the median TBWL at 24month of 18.4%
- Patients who lost ≤10 TBWL at 6 months, had poor long term results and should be considered for adjunctive therapy.

Table 1 Comparison of %TBWL between the three centers in the study at 6 and 24 months

N total	*N* lost to follow-up	%TBWL Madrid	%TBWL Rochester	%TBWL New York	%TBWL All	*p* value
6 months						
248	33	15.8 [14.6–17]	14 [11.5–16.3]	14.2 [12.2–16.25]	15.17 [14.2–16.25]	0.25
24 months [18–24]						
92	35	19.3 [15.1–23.5]	16.8 [11.5–22.1]	19.5 [13.5–25.6]	18.6 [15.7–21.5]	0.7

Ninety-five percent confidence intervals shown

Conclusion:
ESG effectively induces weight loss up to 24 months in moderately obese patients. Failure to achieve adequate weight loss can be predicted early, and patients should be offered adjunctive therapies to augment it.

Key Points:
1. %TBWL was 18.6% at 24 months
2. %TBWL was statistically consistent between the three centers (using three different techniques and patient population)
3. Serious adverse events were 2% - most associated with reducing the fundus*

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