Control of eating attributes and weight loss outcomes over one year after sleeve gastrectomy in people with severe obesity

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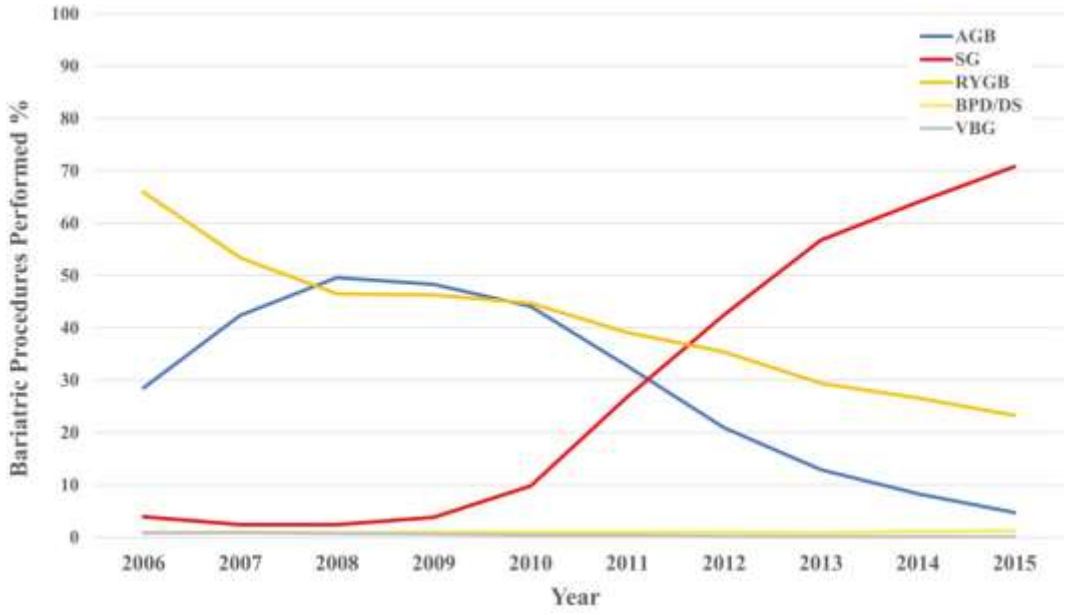
Conflict of Interest Disclosure

I have no potential conflict of interest to report.

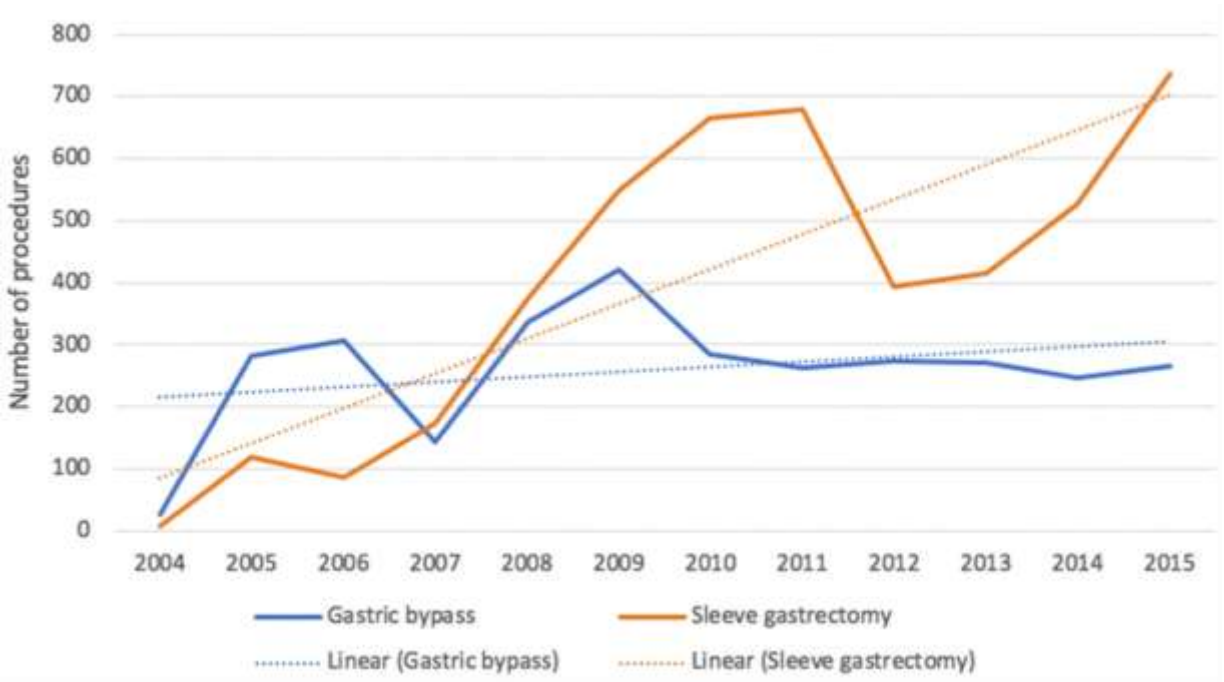
Significance

Sleeve gastrectomy (SG) is one the most common bariatric procedures performed worldwide and its frequency is increasing

United States of America



New Zealand



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Significance

- There is a great degree of variability in weight loss response (5% – 60%)
- Factors influencing weight loss after sleeve gastrectomy:
  - Striking change in gut hormones
  - Genetic predisposition
  - Energy balance neurocircuitry changes
  - Behavioral
  - Lifestyle
  - Psychosocial
  - Environmental influences
- Not easily measured in the clinical settings

Predicting the effectiveness of surgery is challenging and elusive

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Study aim

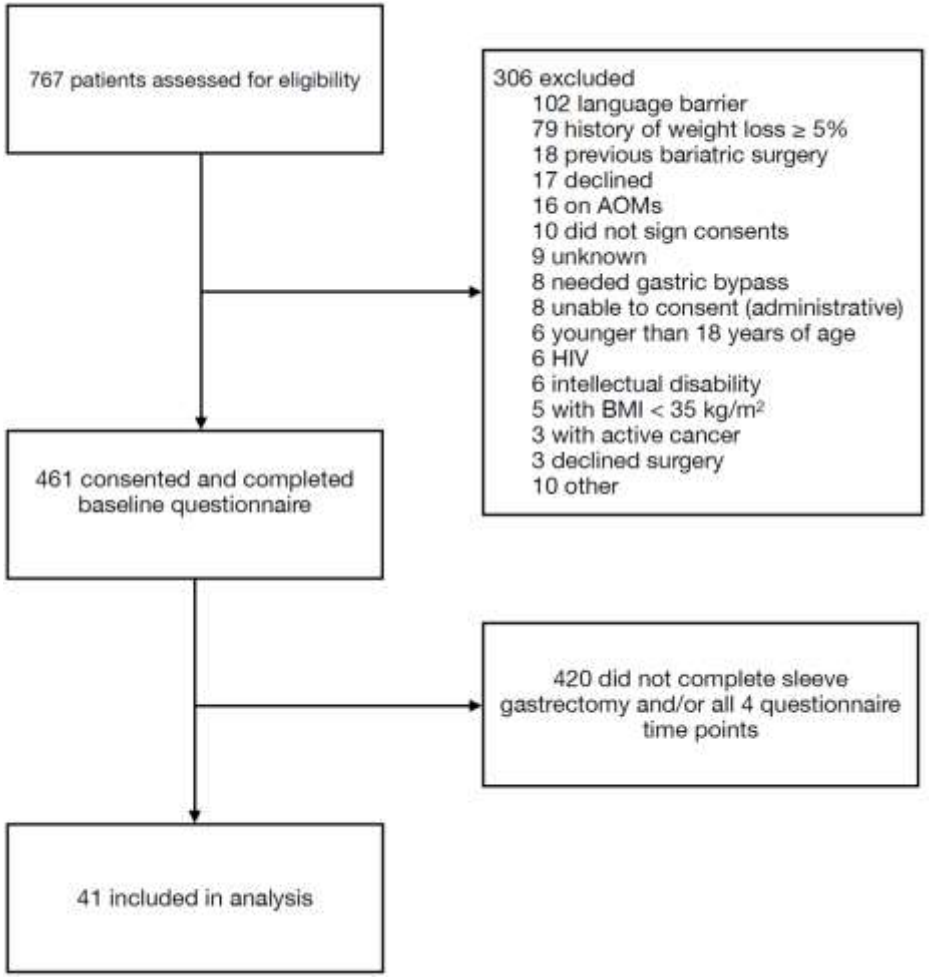
compare various Control of Eating attributes before and after SG depending on the achievement of optimal weight loss target at one-year post-SG

Study methodology

- Prospective longitudinal pre-post cohort study
- Series of validated Control of Eating Questionnaires
- Timepoints:
  - ❖ initial pre-surgical visit (baseline)
  - ❖ 3, 6, and 12 months after SG
- Optimal weight loss target:
  - ❖ Total weight loss (TWL) of ≥25% 12 months post-SG
- Primary outcomes:
  - ❖ Δ Control of Eating attributes
- Parameters assessed:
  - ❖ Sex, age, baseline weight, baseline BMI, and smoking status

Dalton M, Finlayson G, Hill A, Blundell J. Preliminary validation and principal components analysis of the Control of Eating Questionnaire (CoEQ) for the experience of food craving. Eur J Clin Nutr. 2015;69(12):1313-1317. doi:10.1038/EJCN.2015.57

Study methodology



Study results

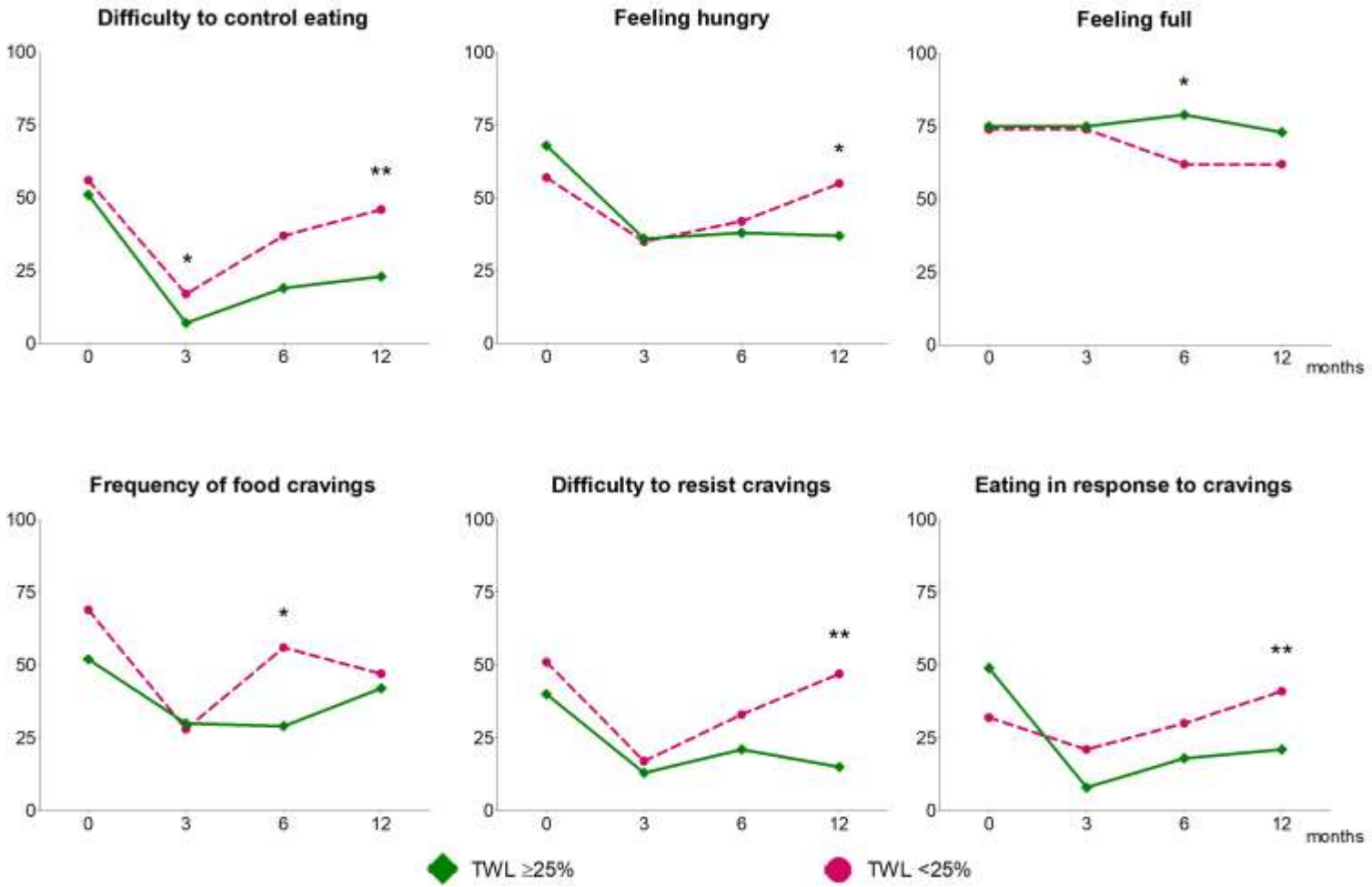
Patient baseline characteristics

Parameter	All patients n = 41	% total weight loss at 12 months		
		≥ 25%	< 25%	p-value
Demographics				
Age, years	41.7 ± 10.6	39.4 ± 10.5	43.4 ± 10.6	>0.05
Sex, female	33 (80.5%)	15 (78.3%)	18 (83.3%)	>0.05
Weight status				
Weight at baseline, kg	126.4 ± 19.0	122.4 ± 15.6	129.6 ± 21.2	>0.05
BMI at baseline, kg/m^2	43.6 (35.2 – 66.3)	42.8 (37.4 – 66.3)	44.9 (35.2 – 64.2)	>0.05
Smoking status				
Never	28 (68.3%)	11 (61.1%)	17 (73.9%)	>0.05
Current or former	13 (31.7%)	7 (38.9%)	6 (26.1%)	>0.05

Values are expressed as n (%) for categorical variables, μ ± SD for normally distributed and median (min-max) for not normally distributed continuous variables.

Analyses are based on independent t-test (two-sided), Mann-Whitney test, and Fisher's exact test (two-sided).

Study results



Changes in selected Control of Eating scores between individuals with severe obesity who achieved a total weight loss ≥25% target at one year post-SG and those who did not

Differences in scores between groups analyzed using a two-tailed Mann-Whitney test. Statistical significance denoted as * ($p \leq 0.05$) and ** ($p \leq 0.01$)

Study conclusions

- Individuals with severe obesity who achieved a target of ≥25% total weight loss at one-year post-SG have an early occurring improvement in overall eating control at 3 months that steadily persists at 6 and 12 months

- Improvements in other aspects of eating control tend to follow later, at 6- and 12-months post-SG

- These findings may assist in identifying individuals with inadequate response and choosing tailored behavioural, biofeedback-based techniques, and pharmaceutical interventions to help attain optimal weight loss targets

Thank you!