Long Term Outcomes from Our Initial Sleeve Gastrectomy Experience

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Introduction:

- Many studies have demonstrated that long term weight loss is better sustained with weight loss surgery when compared to diet/exercise alone.
- Laparoscopic sleeve gastrectomy has become the most common bariatric operation worldwide
- It has shown promising short term results in regards to excess weight loss, but long term efficacy has yet to be demonstrated

Objectives:

- The aim of this study was to determine the sustainability of weight loss, remission of obesity and its associated comorbidities after sleeve gastrectomy.
- Examine the protentional benefits of the sleeve gastrectomy in enabling patients to undergo further life changing surgeries

Methodology:

- 101 morbidly obese patients underwent SG between 2009-2012 at our institution (86 female, 15 male).
- Average age 44.27 YOA
- The average BMI prior to sleeve gastrectomy was 49.17.
- The mean number of chronic medications per patient preoperatively was 4.78 and average number of comorbidities were 4.96
- Median follow-up period reached 8.1 years.
- Long term efficacy analysis and data collection was performed in respect to
  - Body mass index (BMI)
  - Comorbid conditions
  - Chronic medications
  - Revisional surgeries
  - Other obesity related surgeries.
- Parameters were tracked at 1 year, 5 year, and 8 year mark.

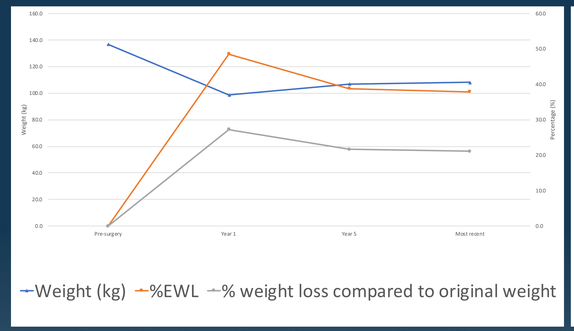


Figure 1 Trend in average weight change, %EWL, and % weight loss at pre-surgery, post-operative year 1, post-operative year 5, post operative year 8. Left vertical axis corresponds to blue line for Weight (kg). Right vertical axis corresponds to orange and gray lines (%EWL and %Total weight loss, respectively).

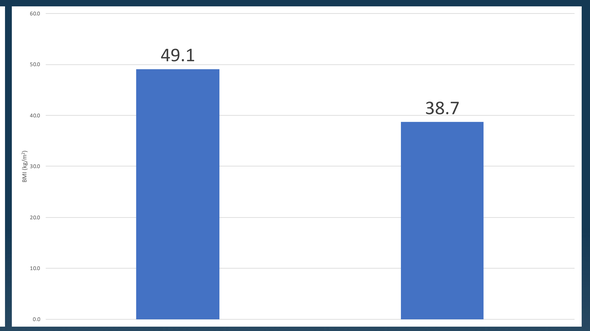


Figure 2 Average BMI at pre-surgery (left) compared to year 8 follow-up date(right)

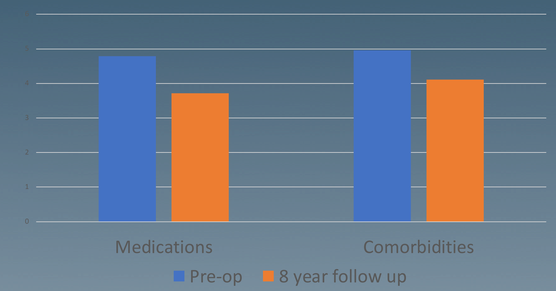


Figure 3 Starting average medication count compared to 8 year medication count (p=0.001) and Starting average comorbidity count compared to 8 year comorbidity count (p=0.0024).

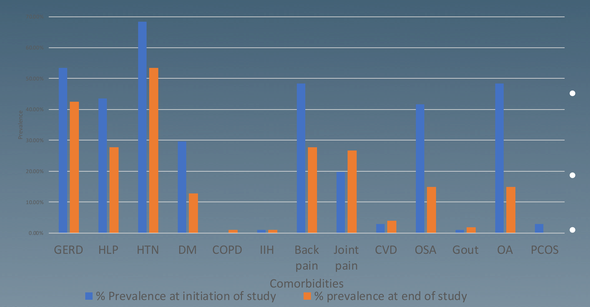


Figure 4 Change of prevalence of comorbidities pre-surgery and at 8 year follow up

Results:

- At 1 year EWL was 48.52%
- At 5 years EWL was 38.82%
- At 8 years EWL was 37.92%

- Final average BMI of 38.77, a reduction from 49.17
- An overall reduction in 1.069 chronic medications per patient was noted from index weight loss operation

- 22.77% resolution of dyslipidemia, 19.80% resolution of hypertension, 27.72% resolution of chronic back pain, 31.68% resolution of sleep apnea, and 20.79% resolution of type 2 diabetes.

- 52 surgeries facilitated by proper weight loss:
  - 16 back surgeries (ΔBMI -15 kg/m^2)
  - 27 joint surgeries (ΔBMI -12.7 kg/m^2)
  - 1 heart surgery (ΔBMI -12.7 kg/m^2)
  - 1 kidney transplant (ΔBMI -8 kg/m^2)

- 2.97% (n=3) required conversion to bypass for reflux refractory to medical management and 0.9% (n=1) underwent a lower esophageal sphincter augmentation (Linx system) placement for reflux

Complications	Percentage
Leaks	3.90%
Perforations	.90%
Strictures	1.90%

Table 3 Early and Late Complications and prevalence post-surgery

Discussion

- Despite the paucity of research supporting the long-term efficacy of LSG, LSG has by far been the most popular type of bariatric surgery since 2014.
- Our data demonstrates long term efficacy of weight loss with an average %EWL at 8 years to be about 40%
- Improvement in comorbidities demonstrated reinforces LSG has a long-term impact on remission of GERD, diabetes, hyperlipidemia, hypertension, back pain, OSA and osteoarthritis
- Our data demonstrates that SG is a great tool that is underutilized in facilitating access to much needed life changing surgeries