

## Difference Between Laparoscopic Sleeve Gastrectomy and Roux-en-Y Gastric Bypass Regarding Weight Loss Effect and Amount of Food Intake According to Level of BMI

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### <Background>

Laparoscopic sleeve gastrectomy (LSG) for morbidly obese patients is gaining popularity in Japan. Its indications and long-term results are currently under evaluation, whereas laparoscopic Roux-en-Y gastric bypass (LRYGB) is the golden standard procedure with good long term outcomes. In addition, some articles reported that LSG could not lead to sufficient weight loss for super morbid obesity. This study aimed to compare the difference of excess weight loss (EWL) and amount of food intake of patients with BMI  $< 50$  or  $\geq 50$  between LSG and LRYGB.

### <Methods>

For this study, 123 patients who underwent LRYGB (48patients) or LSG (75 patients) were retrospectively analyzed for 24 months after surgery. There are 101 patients with BMI  $< 50$  in LSG group (n=60) or LRYGB group (n=41), and 22 patients with BMI  $\geq 50$  in LSG group (n=15) or LRYGB group (n=7). We compare the EWL and the amount of food intake after LSG to those after LRYGB according to BMI. We analyzed the amount of food intake by means of diet recall and a questionnaire. We defined the preoperative amount of food intake as 100% and calculated the rate of change after surgery.

### <Results>

As for BMI  $< 50$ , the percentage of EWL and the rate of change of food intake at 24-month follow up point were 81.7% and 52% in LSG group and 82.8% and 47% in LRYGB group. As for BMI  $\geq 50$ , the percentage of EWL and the rate of change of food intake at 24-month follow up point were 29.8% and 54% in LSG group and 62.3% and 58% in LRYGB group. This data show that the EWL of patients with BMI  $\geq 50$  after LSG at 24-month follow up point is not comparable to the other results, but the rate of change of food intake of the same group is comparable.

### <Conclusion>

As for BMI  $\geq 50$ , we need to restrict the amount of food intake after LSG more than LRYGB for the purpose of bettering the EWL. However, it means that LSG can be a standalone procedure for morbidly obese patients with BMI  $< 50$  as well as LRYGB, but LSG is not expected to be performed as a solo procedure for the patients with BMI  $\geq 50$ .