# The Influence of Pregnancy on Long Term Weight Loss After Bariatric Surgery

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## BACKGROUND

- Obesity is a chronic and common disease , affecting 41.9% of US adults between 2017 and 2020, with a higher prevalence in women compared to men
- Bariatric Surgery has proven to be the most effective weight loss method compared to medical therapy
- Bariatric Surgery is commonly performed on obese women of reproductive age
- Post op bariatric patients have a mean weight loss of 33% of their pre-op body weight. Common predictors of insufficient weight loss and weight regain after bariatric surgery include dietary non-adherence, physical inactivity, mental health issues and anatomic surgical failure

## OBJECTIVES

- There is limited literature evaluating the impact of pregnancy in the post op period on long term weight loss after bariatric surgery
- **The objective of this study is to evaluate the effects of post operative pregnancy on weight loss after Bariatric Surgery, specifically after Laparoscopic Sleeve Gastrectomy (SG) and Roux-en-Y Gastric Bypass (RYGB)**

## METHODS

- A retrospective study was conducted to asses our center's data for laparoscopic SG and RYGB from the MBSAQIP from January 2017 to December 2018
- We included all females with morbid obesity class II or greater, between ages 20 and 40, who underwent laparoscopic SG or RYGB and had a 4 year follow up
- Baseline demographics were collected for this group including age, BMI, ASA class, smoking status, anticoagulation use and presence of comorbidities (DM, HTN, COPD, sleep apnea, MI, CVA, HLD, GERD) (table 1)
- Pre-op and post-op data were collected for all patients, including: presence of pregnancy after surgery, median weight before surgery, median BMI before surgery, surgical approach, date of last follow-up visit, median weight at 4 year follow-up, and mean BMI at 4 year follow-up

| | Pregnant n= 35 | Non-Pregnant n=159 | p-value |
|---|---|---|---|
| Median age (IQR) | 29 (26-33) | 31 (28-34) | 0.107 |
| Median BMI preop (IQR), in kg/m² | 43 (39.9-47.6) | 43.7 (30.7-48.4) | 0.427 |
| | | | |
| ASA | | | 0.528 |
| II | 16 (46%) | 71 (45%) | |
| III | 19 (54%) | 88 (55%) | |
| | | | |
| Surgical Technique | | | 0.890 |
| Sleeve | 26 (74%) | 136 (86%) | |
| Gastric Bypass | 9 (24%) | 23 (14%) | |
| | | | |
| Hypertension | 5 (14%) | 28 (18%) | 0.425 |
| Diabetes Mellitus | 8 (23%) | 13 (8%) | 0.018 |
| CVA | 0 (0%) | 1 (0.6%) | 0.801 |
| | | | |
| Smoking status | | | 0.087 |
| Former | 11 (31%) | 26 (16%) | |
| Current Smoker | 0 (0%) | 4 (2.5%) | |
| | | | |
| COPD | 0 (0%) | 1 (0.6%) | 0.820 |
| GERD | 7 (20%) | 40 (25%) | 0.342 |
| OSA | 5 (14%) | 22 (14%) | 0.563 |
| DLP | 2 (6%) | 21 (13%) | 0.171 |
| Anticoagulation use | 2 (6%) | 1 (0.6%) | 0.084 |

Table 1. Patient characteristics

## RESULTS

- A total of 194 female patients of reproductive age underwent laparoscopic SG or RYGB in our academic center between Jan 2017 and Dec 2018
- Out of these, 35 became pregnant within a 4 year follow up period and 159 did not
- The median post-op BMI in the pregnant group was 33.3kg/m^2 at 4 years; the median post-op BMI in the non-pregnant group was 33.5 kg/m^2 at 4 years
- The mean excess BMI loss % (EBMIL %) at 4-year follow up was 49.9% in the pregnant group and 55.5% in the non-pregnant group
- **There was no significant difference between the groups when comparing the outcomes**

## CONCLUSIONS

- Our results show that pregnancy in the post op bariatric patient has no impact on weight loss after laparoscopic SG and RYGB, with no significant difference in EBMIL % between pregnant and non-pregnant patients at the 4-year follow up
- This data further supports the limited existing literature suggesting that pregnancy does not negatively impact long term weight loss after bariatric surgery