

Effect of Elevated Body Mass on Surgical Complications in Patients Undergoing Body Contouring after Massive Weight Loss

Pooja Humar, BS; Annie Glenney, BA; Joseph Mocharnuk, BA; Malke Asaad, MD; Fuat Baris Bengur, MD; Jeffrey Gusenoff, MD; J Peter Rubin, MD MBA

Department of Plastic Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA.

Background

- Increasing rates of obesity in America, with patients electing to undergo bariatric surgery
- Whole body deformities addressed by body contouring surgery
- In 2019, more than 49,000 patients underwent body contouring after massive weight loss
- Even after bariatric surgery, many patients have a BMI in the overweight or obese range

Objectives

Analyze the impact of pre- and post-bariatric BMI, along with total change in BMI, on outcomes after body contouring surgery

Methods

- Retrospective cohort study from Jan 2002 – Dec 2017
- Inclusion Criteria
 - ≥ 18 years of age
 - ≥ 50 pounds weight loss

Max BMI: Prior to weight loss (self-reported)

Current BMI: At time of body contouring surgery

Weight change: Max weight – Current weight

Results

Demographics

- 942 patients underwent body contouring after massive weight loss
- Age: 48.9yrs ± 13.5yrs
- Gender: 884 female (93.8%), 58 male (6.2%)

Average Max BMI: 51.9 ± 9.8
Average Current BMI: 30.5 ± 6.0
Average Weight Change: 131.2lbs ± 51.5lbs

Body Contouring Procedures

- Total # of Procedures: 1814
- Total # of Operative Cases: 1063

Upper Extremity

Brachioplasty: 190 (10.5%)
 Upper Body Lift: 32 (1.8%)

Breast

Mastopexy: 165 (9.1%)
 Reduction: 84 (4.6%)
 Augmentation: 34 (1.9%)
 Gynecomastia: 33 (1.8%)

Abdomen

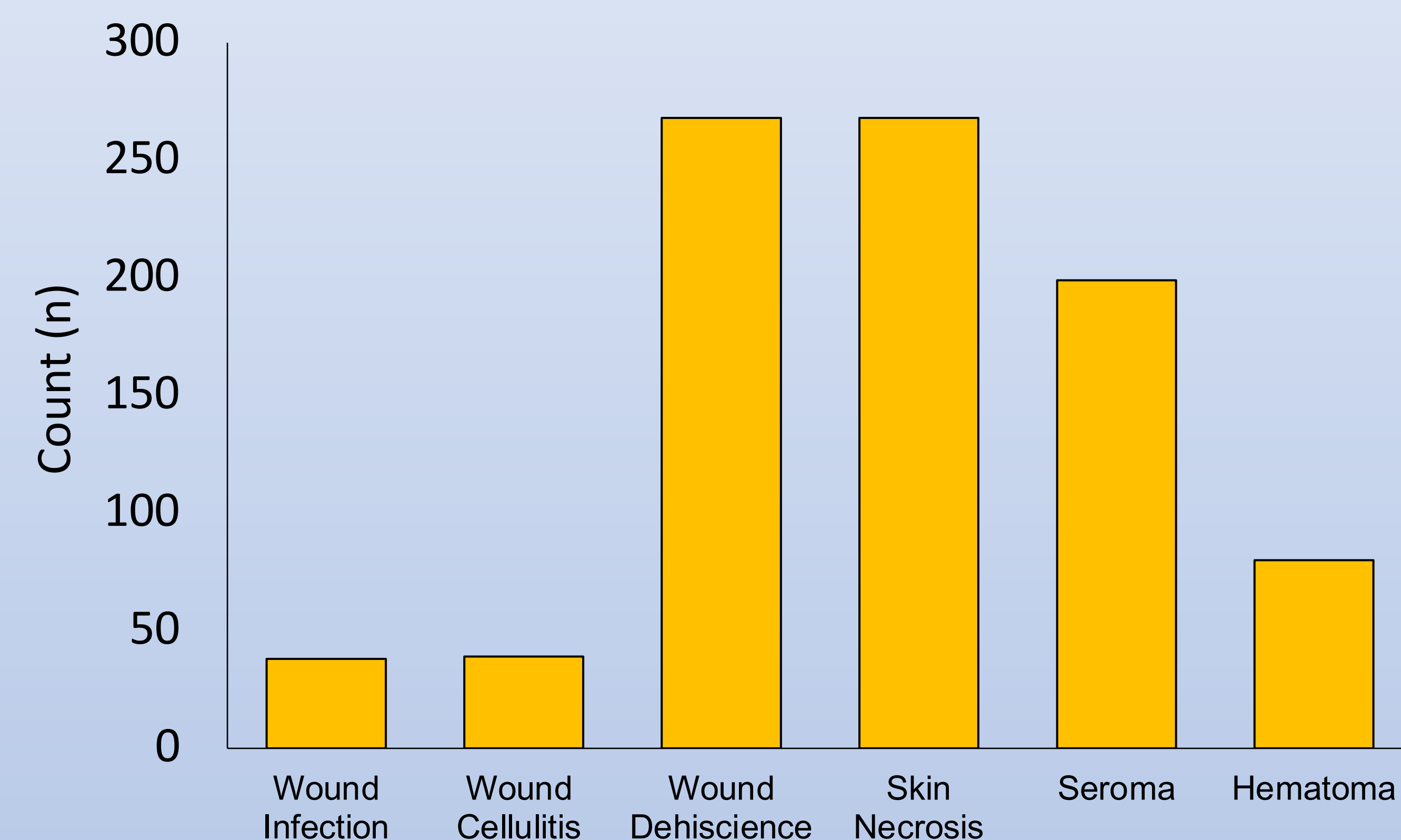
Panniculectomy: 873 (48.1%)
 Abdominoplasty: 149 (8.2%)

Lower Extremity

Lateral Thigh/Butt Lift: 176 (9.7%)
 Medial thigh lift: 78 (4.3%)

Post-Operative Complications

- 424 (45.1%) patients had at least 1 post-operative complication



- Increased Current BMI associated with increase complication rate

For a 1-point increase in Current BMI:

- 2.4% increase in wound dehiscence
- 2.0% increase in formation seroma

Multiple-Operations Analysis

- Both increased Current and Max BMI were associated with increased seroma formation (p=0.01)
- Increased Current BMI associated with increased wound dehiscence and wound infection (p=0.02)

Conclusions

- Increased pre and post weight loss BMI increase the risk of post-operative complications
- Total change in BMI does not have a significant effect on post-operative outcomes
- Post-operative outcomes are affected by single vs. multiple procedure cases
- High complication rate in the massive weight loss population

Limitations/Future Directions

- Limitation:** Exact time points at which the complications occurred was not known (early vs. late)
- Next Steps:** Subset analysis to determine differences in outcomes amongst various procedures, and how weight and procedure combination has varying affects

Contact

Pooja Humar
 University of Pittsburgh School of Medicine (MS4)
 Cell: 412-418-8252
 Email: poh6@pitt.edu