Preoperative Evaluation of the Body Contouring Patient

The Cornerstone of Patient Safety

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KEYWORDS

• Body contouring • Bariatric surgery • Skin laxity • Weight loss • Skin excess • Nutritional evaluation

KEY POINTS

- Body contouring after massive weight loss is often the final phase of a long and positive journey for the bariatric patient.
- As the prevalence of obesity increases and many more continue to seek bariatric and subsequently body contouring surgery, it is critical that plastic surgeons become well versed in not only techniques that address skin laxity, but also more familiar with the unique set of issues that the postbariatric patient presents.
- A careful and comprehensive approach like the one presented in this article allows for safe and effective treatment of these patients.

INTRODUCTION

As a result of the obesity pandemic, more and more individuals are seeking bariatric surgery for weight loss and resolution of conditions related to obesity. As the numbers have risen to greater than 200,000 cases per year, the number of postbariatric massive weight loss patients presenting to the plastic surgeon for body contouring to address excess skin laxity is increasing.[1] However, this patient population requires unique insight and consideration as part of the preoperative evaluation. Nutritional derangements are common, psychosocial issues are prevalent, and the sequelae of past and present medical conditions can all affect surgical planning and outcomes. This article familiarizes the plastic surgeon with the body contouring candidate and provides tools that may assist in surgical planning.

We have identified six key assessment points as part of a comprehensive evaluation of the massive weight loss patient presenting for potential body contouring surgery: (1) time from gastric bypass to body contouring procedures; (2) body mass index (BMI) at presentation; (3) evaluation of medical comorbidities; (4) nutritional assessment; (5) psychosocial status; and (6) physical deformities and potential for combined procedures. An overview of these points is presented in **Box 1**.

PREOPERATIVE EVALUATION AND PROCEDURE TIMING

Initial preoperative history should focus on age of onset of obesity, family history of obesity, type and date of bariatric surgery performed, and course of weight loss since surgery. Anthropometric measures should include height, weight (highest, lowest, and current), and BMI. Determination regarding patient's weight stability should be made because many patients have a 12- to 18-month period of continued weight loss after

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Box 1
Summary of key points in evaluation of the weight loss patient

BMI

- Best candidates have reached a BMI <30
- Functional operations preferred for higher BMIs with associated physical impairments

Timing

- Minimum 12 mo after bariatric surgery
- Weight stability for a minimum of 3 mo

Medical comorbidities

- Many resolve following bariatric surgery, but residual disease states must be investigated
- Tight glycemic control for diabetics
- Cardiac evaluation for patients with concerning symptoms or sedentary lifestyle
- Rigorous work-up for history of deep venous thrombosis or pulmonary embolism and prophylaxis
- Appropriate use of medical consultants

Nutritional status

- Identify type of bariatric procedure performed
- Assess protein intake by history, with a goal of 70–100 g/day before body contouring surgery
- Document supplements used
- Assess for signs of micronutrient deficiency
- Supplement micronutrients (eg, iron, vitamin B_{12}, calcium) as needed
- Refer patient back to bariatric surgeon if there is protracted nausea/vomiting or weight loss plateau at unacceptably high BMI

Psychological status

- Establish rapport early in initial consultation
- Ask patients to describe their concerns and clearly delineate goals and priorities in their own words
- Emphasize the tradeoff of skin for scar
- Assess for reasonable patient expectations
- Depression is pervasive
- Evaluate for physical and emotional support networks
- Patients with known or suspected body dysmorphic disorder, bipolar disorder, or schizophrenia should undergo a mental health evaluation

From Bossert RP, Rubin JP. Evaluation of the weight loss patient presenting for plastic surgery consultation. Plast Reconstr Surg 2012;130(6):1363; with permission.

their bariatric surgery. Inquiry into weight changes over the past 1 and 3 months before presentation should be made as part of the patient's history. We define weight stability as no more than an average of 5 lb/month loss over 3 months. A patient still undergoing significant weight loss may be in a state of protein-calorie deficiency and consequently may be at risk of suboptimal wound healing. Those deemed not stable are delayed and reevaluated in 3 months. An overview of our timing of surgical planning is provided in **Box 2**.

PATIENT BMI

Provided the patient has achieved weight stability, evaluation of BMI can be an indicator of potential complications and aesthetic outcomes. We consider patients with BMI less than 30 kg/m^2 to be the best candidates for a wide range of procedures and combinations thereof.[2] A prospective study of 511 postbariatric body contouring cases revealed that higher prebariatric maximum BMI and BMI at time of presentation were associated with increased complications in patients undergoing single procedures.[3] Similarly, the degree of change between these two measures (maximum BMI and BMI at time of presentation) was found to be correlated with overall complications in patients undergoing multiple procedures.[3] Other studies have also shown similar findings related to complication rates and higher BMI.[2,4] Those presenting with BMI between 30 and 35 kg/m^2 should be considered based on their individual body fat distribution. For example, a patient with BMI 35 and a gynecoid body type is likely to have a better aesthetic outcome from abdominal body contouring compared with an individual with the same BMI but an android body type. Patients presenting with BMI between 35 and 40 kg/m^2 are poorer aesthetic candidates because they typically have thicker subcutaneous tissue and intra-abdominal fat content. Surgery performed in these patients is often single procedure or staged and focuses on functional improvements (ie, panniculectomy and reduction mammoplasty) so that the patient can improve exercise tolerance and further reduce weight for future aesthetic body contouring. Unless, there is a significant medical indication, patients with BMI greater than 40 are deferred for further weight reduction.

MEDICAL COMORBIDITIES

The resultant weight loss from bariatric surgery often improves or resolves active health issues, such as diabetes and hypertension. In fact, this effect can typically be seen within the first 6 months