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Psychiatric Considerations of the Massive Weight Loss Patient

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Abstract

As bariatric surgery for extreme obesity continues to grow in popularity, so does interest in post-bariatric surgery body contouring surgery. There is an extensive literature on the psychological characteristics of persons with extreme obesity who undergo bariatric surgery, as well as the psychological changes that typically occur postoperatively. Far less, however, is known about the psychological aspects of body contouring following massive weight loss. In this article, we review the psychosocial characteristics of individuals with extreme obesity who undergo bariatric surgery, as well as the changes in these traits that typically occur postoperatively. As there have been few studies of the psychological aspects of massive weight loss patients, we use related literatures on the relationship between body image dissatisfaction and other plastic surgical procedures to identify the most relevant research and clinical issues for this unique patient population. Appropriate psychiatric screening and management of these patients is believed to play an important role in successful postoperative outcomes.

Obesity, defined by a body mass index (BMI) of at least 30 kg/m², has been identified by the World Health Organization as a “global epidemic.”[1] This problem is especially prominent in the United States, where the prevalence of obesity more than doubled from 15% of adults in 1976–80 to 32% in 2003–04.[2,3] Extreme obesity, characterized by a BMI of at least 40 kg/m², has increased even more rapidly, as evidenced by a four-fold rise in prevalence from 1986 to 2000.[4] Given the effects of excess body weight on cardiovascular, respiratory, and endocrine function, it is no wonder that obesity is considered by many to be one of the most pressing issues in public health.[5]

Several studies have found that modest weight reductions, of 5%–10% in initial weight, are associated with significant health benefits for overweight (BMI 25–29.9 kg/m²) and obese individuals.[5] For persons with extreme obesity, however, more drastic weight losses may be necessary to significantly reduce morbidity and mortality risks. Furthermore, many extremely obese persons suffer from impairments in quality of life and other psychosocial distress.[6–9] Such disturbances may motivate patients’ decisions to seek bariatric surgery, which is not only the riskiest weight loss method, but also the most efficacious.[5]

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The popularity of bariatric surgery has surged in recent years. Whereas 13,365 bariatric procedures were performed in 1998, an estimated 103,000 such surgeries were performed in 2003.[10] Presently, the most common bariatric procedure in the United States is the Roux-en-y gastric bypass surgery.[11] Adjustable gastric banding (referred to as the LapBand® procedure) is gaining popularity in the United States.[12] A meta-analysis found mean reductions of 41.5 kg and 34.8 kg with the gastric bypass and adjustable gastric banding procedures, respectively.[13]

There is significant patient-to-patient variability, however, in the long-term results of bariatric surgery. One large study, for example, found that 9% of gastric bypass patients and 25% of adjustable gastric banding patients had failed to maintain at least a 5% reduction in initial weight 10 years postoperatively.[14] The role of psychological and/or dietary factors in these suboptimal outcomes is not well understood.

This paper will review psychosocial considerations in patients who seek and receive bariatric surgery. We will address preoperative psychological and behavioral characteristics of bariatric surgery candidates and how those characteristics affect, and are affected by, postoperative weight loss. As changes in physical appearance are an obvious outcome of bariatric surgery, we will review research on the relationship between weight and body image. Many patients seek plastic surgical procedures following massive weight loss. Thus, we will review psychological issues related to body contouring surgery following massive weight loss and discuss the psychological assessment and management of these patients.

Preoperative Psychiatric Functioning of Bariatric Surgery Candidates

The significant health problems associated with extreme obesity likely motivate many individuals to pursue bariatric surgery. Many extremely obese persons also pursue bariatric surgery for its anticipated effects on their psychosocial status. In the past several years, several comprehensive reviews of the literature on the psychosocial and behavioral aspects of bariatric surgery have been published.[6–9,15–18] This literature is used to inform the summary below.

Numerous studies have found a high rate of psychopathology among persons with extreme obesity who pursue bariatric surgery. Between 20%–60% of patients have been characterized as suffering from an Axis I psychiatric disorder, the most common of which were mood and anxiety disorders.[19–20] Smaller percentages have been diagnosed with substance abuse problems and personality disorders, both of which may impact surgical management and postoperative outcomes.[6–9,15–18]

Of these disorders, depression may be the most significant. In a population-based study of over 40,000 US adults, the risk of major depression in persons with a BMI ≥ 40 kg/m² was nearly five times that in persons of average weight (BMI 18.5–24.9 kg/m²).[21] The risk of depression among patients seeking bariatric surgery may be even greater, as medical and surgical patients typically report more depression than non-treatment-seeking individuals.[22]

Extreme obesity also is associated with reduced health-related quality of life.[23–31] This is not surprising, as extremely obese individuals frequently report significant pain in weight-bearing joints, as well as impaired flexibility and stamina.[32–35] These physical problems lead to difficulties in performing basic activities such as walking, climbing stairs, bathing, and dressing, which are among the most distressing aspects of extreme obesity.[36]

Impairments in quality of life may contribute to the increased risk of depression found in extremely obese persons. A cross-sectional investigation of quality of life and mood in a sample of bariatric surgery patients found mean depression scores in the subclinical range for persons with unimpaired physical function, but in the clinically significant range for those whose weight

limited their function.[24] This was true in persons with BMIs over 60 kg/m², as well as in more typical bariatric surgery candidates, whose BMIs were in the 40s or 50s.

An important aspect of quality of life is body image. Dissatisfaction with one's body image is believed to motivate many behaviors, including weight loss, exercise, cosmetic and fashion purchases and cosmetic surgery.[37–43] Overweight and obese individuals – especially women – tend to be more dissatisfied with their bodies and outward appearance than their normal weight counterparts.[40–42,44] The positive relationship between BMI and body image dissatisfaction may even be stronger than the research suggests, given that many studies did not include persons with extreme obesity.[45–52] Body image dissatisfaction is related to lower self-esteem and increased symptoms of depression in obese individuals, and, therefore is believed to be a marker for other psychological or psychiatric problems.[49,51,53–55]

A number of studies have focused on the eating behavior of individuals who present for bariatric surgery. The most common and likely relevant condition is binge eating disorder (BED), which is characterized by eating a large amount of food within a 2-hour period of time while feeling a subjective loss of control.[56] (Purging or other compensatory behaviors seen in bulimia nervosa are not found in BED.) While early studies suggested that up to half of bariatric surgery candidates displayed features of BED,[57–58] a recent study which rigorously applied the diagnostic criteria suggested that the rate of the disorder may be as low as 5%.[59] Thus, it is clear that this pattern of eating is an anomaly, even among those who are 100 lb or more overweight. When BED is present, it can be considered a marker for additional psychopathology, as the prevalence of mood, anxiety, personality, and substance-use disorders is greater among persons with vs. without this disorder.[60–61]

Another factor that may contribute to psychosocial distress in those with extreme obesity is weight-related stigma. Bias against obese individuals has been found in social, educational, occupational, and medical settings and may be associated with discriminatory treatment.[62–63] Although empirical studies have not examined this issue, it is likely that severely obese persons experience more pervasive and intense stigma than their less obese counterparts.

In summary, studies have found high rates of psychopathology, impairments in quality of life and disordered eating among bariatric surgery candidates. Results from the investigations of psychopathology and disordered eating, however, must be viewed with caution because of a variety of methodological issues. These limitations have made it difficult to make conclusive statements about the impact of preoperative psychiatric status and eating behavior on postoperative outcome, which is the most important question yet to be definitively addressed by this literature.

Does Preoperative Psychological Functioning Predict Postoperative Outcomes?

The large majority of bariatric surgery programs in the United States require a mental health evaluation as part of the patient selection process.[64] Such evaluations were universally recommended in a 1991 NIH consensus development panel statement and recommended on an as-needed basis in a more recent statement by the ASBS.[65–66] Although there is a great deal of variability in the way preoperative mental health evaluations are conducted, most psychologists and other professionals who perform these assessments agree that significant psychiatric issues contraindicate bariatric surgery surgery.[64,67] Typically cited contraindications include active substance abuse, active psychosis, bulimia nervosa, and severe uncontrolled depression.[66,68] These features are thought to limit capacity for informed consent or to increase the likelihood of postoperative medical complications.

Whether these and other psychological factors are related to postoperative weight loss is an issue that has not been adequately resolved. There is no clear relationship between preoperative depression and postoperative weight loss. Some studies found that depression was related to less weight loss,[69] while others found no relationship.[53,70–71] Still others found greater weight loss among persons with more depressive symptoms.[72]

Research on the relationship between preoperative binge eating and postoperative weight loss is similarly unclear. Several studies have found that the presence of BED predicted suboptimal surgical weight loss or premature weight regain,[73–74] but at least one study found no relationship between BED and postoperative outcomes.[75] Many of these investigations, unfortunately, have been limited by a number of methodological concerns. However, given the potential association with premature weight regain, most programs evaluate for the presence of disordered eating prior to bariatric surgery.[64,67]

In their review of the psychosocial literature, Herpertz and colleagues drew a thought-provoking conclusion.[7] They suggested that psychosocial distress that is secondary to obesity—such as significant body image dissatisfaction or “weight related” depression—may facilitate weight loss following surgery. In contrast, the presence of significant psychopathology that is independent from the degree of obesity—such as major depression—may inhibit patients’ ability to make the necessary dietary and behavioral changes to have the most successful postoperative outcome possible.

During the pre-bariatric surgery psychological evaluation, when a formal psychiatric disorder or significant psychological distress is observed, psychiatric or psychological treatment is typically recommended prior to surgery.[76] This recommendation is typically made to between 25–35% of bariatric surgery candidates.[19,67,77] Of primary concern is ensuring that the distress – whether “garden variety” depression or psychosis – is optimally controlled prior to exposing patients to the physical discomfort and stress of drastic lifestyle change associated with surgery.

Postoperative Psychological Functioning of Bariatric Surgery Patients

The massive weight loss following bariatric surgery is associated with significant improvements in many obesity-related comorbidities.[13,78] Numerous studies have found that patients similarly experience improvements in psychosocial status postoperatively.[47, 70,73,79–88] As summarized in the comprehensive reviews, most psychosocial characteristics -- including self-esteem, depressive symptoms and health related quality of life and body image —improve dramatically in the first year after surgery.[6–9,15–17] These psychosocial benefits, however, appear to be limited to the first few postoperative years. A growing body of evidence suggests that the occurrence of postoperative binge eating is associated with weight regain within the first 2 years after surgery.[57,74,89] This finding may be particularly important when the timing of body contouring procedures is considered, as discussed below.

Perhaps the most important psychological issue for the massive weight loss patient interested in body contouring is body image. Bariatric surgery patients typically report improvements in body image postoperatively. Obese women report improvements in body image following weight loss with behaviorally-based programs and bariatric surgery.[47,90–92] Most studies, however, have only investigated changes in the first or occasionally second postoperative year. Furthermore, some bariatric surgery patients report residual body image dissatisfaction associated with loose, sagging skin of the breasts, abdomen, thighs, and arms following massive weight loss.[42] More than two-thirds of post-bariatric surgery patients considered the development of excess skin to be a negative consequence of surgery.[93] This dissatisfaction

likely motivates some individuals to seek body contouring procedures to address these concerns.

Psychological Aspects of Plastic Surgery

Over the past 50 years, a sizable literature has investigated the psychological characteristics of individuals who seek plastic surgery as well as the changes in a range of psychosocial domains postoperatively. As reviewed in detail elsewhere,[94] early studies suggested that cosmetic surgery patients were highly psychopathological. More contemporary investigations have found far less psychopathology among those who seek cosmetic surgery. Within the past decade, the focus of this literature has turned to the issues related to body image. Dissatisfaction with one's appearance or body image has long been thought to play a role in an individual's decision to undergo plastic surgery.[95–97] Studies have repeatedly found that cosmetic surgery patients report heightened body image dissatisfaction prior to surgery.[98–103] Most patients report significant improvements in their body image postoperatively.[104–107] No study, however, has followed patients for more than 2 years postoperatively. As a result, it is unclear if cosmetic surgery leads to longer lasting improvements in body image.

While heightened body image dissatisfaction appears to be a common characteristic of cosmetic surgery patients, several studies have found that between 7%–16% of plastic surgery patients meet diagnostic criteria for body dysmorphic disorder (BDD). BDD is characterized by extreme body image dissatisfaction that contributes to a preoccupation with a slight or imagined defect in appearance.[100,108–111] Individuals with BDD frequently seek plastic surgery and other appearance enhancing treatments. In contrast to persons with mild to moderate body image dissatisfaction, the vast majority of persons with BDD, however, experience little change or a worsening in their BDD symptoms postoperatively.[112–113] As a result, some authorities consider it a contraindication to plastic surgery.[95,114–115] As the physical deformities found in most massive weight loss patients are neither slight or imagined, the diagnosis technically cannot be applied to these patients. However, studies of patients undergoing other reconstructive surgical procedures suggest that they often report a level of preoccupation with their appearance consistent with BDD.[109,111] Thus, some body contouring patients likely present for surgery with some form of the disorder, although the exact percentage has yet to be established.

Psychological Aspects of Body Contouring following Massive Weight Loss

As the number of Americans who experience a massive weight loss and present for body contouring surgery continues to grow, so does our understanding of the surgical treatment of these patients. As in other forms of plastic surgery, understanding the psychological aspects of these patients likely play an important role in preoperative assessment and well as postoperative management.[116] To date, the psychosocial and physical outcomes of these procedures, as well as the factors that motivate the decision to seek them, have received little empirical.[117] Thus, the larger literature on the psychological aspects of cosmetic surgery, as well as the breast reduction literature, can be used as a framework from which to understand the relevant psychological issues for massive weight loss patients.[117–118]

The preoperative psychological assessment of the massive weight loss patient should be a central part of the initial plastic surgery consultation. The assessment should focus on several areas: motivations and expectations, appearance and body image concerns, and psychiatric status and history.[117,119–121] In addition, the plastic surgeon should determine that patients are weight stable at the time of body contouring

In our current era of “reality-based” cosmetic surgery television, many massive weight loss patients may hold unrealistic expectations about the postoperative results. Some may

incorrectly anticipate that body contouring surgery will result in a total body transformation that makes their bodies comparable to persons who never experienced excessive body weight. Others may not fully understand that body contouring surgery often produces large and visible scars, skin irregularities, as well as residual deformities in body shape. Patients should be reminded regularly that while surgery may improve body contour, it will not result in a “perfect” body shape. Patients need to be counseled that multiple, often staged procedures may be necessary to meet their goals, each of which encompasses further risk, recovery time, and often expense.

The plastic surgeon should inquire about the massive weight loss patient’s expectations about the impact that body contouring surgery will have on romantic and sexual relationships. Somewhat surprisingly, at least one study has found a higher than anticipated divorce rate following bariatric surgery.[122] It’s quite possible that body contouring surgery may be associated with similar changes to the dynamics of social and romantic relationships. Patients who express unrealistic expectations (i.e., that a troubled marriage may be revived after body contouring) may be more likely to express disappointment and dissatisfaction with their postoperative result, even if the surgeon believes that the result is acceptable.

Patients’ subjective perception of the postoperative result is at the heart of the body image concerns of these, and all, plastic surgery procedures. Thus, the assessment of patients’ body image is a critical part of the initial consultation. It is useful to have patients describe, in their own words, what they dislike about their appearance. In addition, the degree of dissatisfaction should be assessed. As noted above, some body image dissatisfaction is typical among both plastic surgery and bariatric surgery patients. Those who report that they think about their appearance for more than one hour each day or those who report that their concerns leads to significant emotional upset or disruption in daily functioning may be experiencing extreme body image dissatisfaction suggestive of BDD. These patients should likely undergo a psychological consultation prior to body contouring surgery.

The plastic surgeon also should assess the more general psychiatric status and history of patients presenting for body contouring. Approximately 40% of bariatric surgery patients are engaged in some form of psychiatric treatment.[19] By contrast, approximately 20% of cosmetic surgery patients and 5% of reconstructive surgery patients report ongoing psychiatric treatment, most frequently with psychopharmacologic agents.[123] The plastic surgeon is encouraged to contact the treating mental health professional to ensure that body contouring surgery is appropriate at the present time. Patients who are dissatisfied with their postoperative result following plastic surgery (including body contouring) have used their preoperative psychiatric history as part of their legal action against the plastic surgeon, arguing that their psychiatric condition prevented them from fully understanding the procedure and its potential outcomes. Written confirmation from the treating mental health professional that the patient is psychiatrically stable may offer some protection to the surgeon in such cases.

Many bariatric surgery patients receive their psychiatric medications, particularly anti-depressant medications, from their primary care physicians.[19] The plastic surgeon, however, should not assume that these medications are appropriately controlling depressive symptoms. In these situations, depressive symptoms should be assessed further by the plastic surgeon. Observation of patients’ mood, affect, and overall presentation during the body contouring consultation often will provide important clues to the presence of a mood disorder. If one is suspected, neurovegetative symptoms, including sleep, appetite, and concentration, should be assessed. If patients endorse difficulties in any of these areas, they should be asked about the frequency of crying or irritability, social isolation, feelings of hopelessness, and the presence of suicidal thoughts. Affirmative answers to several of these questions necessitate a mental health consultation.

As noted above, binge eating disorder may be of particular concern among massive weight loss patients. Recurrence of the behaviors characteristic of the disorder have been associated with weight regain 18 to 24 months following bariatric surgery.[71,74,82,89] Even among bariatric surgery patients without binge eating disorder, patients often regain 5–10% of their initial body weight within the first 12 to 36 months of surgery and 10–15% over the course of the next decade.[14] Massive weight loss patients often present for body contouring within the first few years of the bariatric procedure. Weight gain following body contouring surgery may affect postoperative satisfaction and potentially compromise the aesthetic result. Thus, the plastic surgeon should likely request that body contouring candidates remain weight stable for approximately 3 to 6 months prior to surgery. Weight stability should be confirmed by in person weigh-ins at the plastic surgeon's office.

We are obviously in the early stages of the growth of body contouring surgery following massive weight loss. Given the recognized importance of psychosocial factors in both bariatric and plastic surgery, it stands to reason that these issues will be equally important in this new area. Unfortunately, there has been little empirical study of these issues as of yet. Until such studies are completed, we need to rely on the literature on the psychological aspects of plastic surgery as a framework to organize recommendations on the psychological assessment and management of the massive weight loss patient.

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