

POST-BARIATRIC BODY CONTOURING: INDICATIONS, SURGICAL TECHNIQUES AND OUTCOMES - A COMPREHENSIVE REVIEW FOR HEALTHCARE PROFESSIONALS AND PATIENTS

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Abstract: Objective: To examine the clinical indications, surgical techniques and results of body contouring plastic surgery in patients undergoing bariatric surgery as part of a treatment for significant weight loss. Methods: This integrative review used the PVO strategy in the PubMed database to search for original articles in English published in the last 5 years, including clinical trials, systematic reviews and/or meta-analyses. After applying the inclusion criteria, 18 articles were considered relevant. Results: The studies indicated an effective improvement in the quality of life and mobility of patients undergoing post-bariatric body contouring plastic surgery, since excess skin is no longer an impediment. Over the past few decades, complication rates have decreased due to greater experience and improved techniques, although they still remain at high levels. Conclusion: Body contouring plastic surgeries showed positive results in the quality of life of post-bariatric patients, minimizing complications due to excess skin that hindered daily activities and psychosocial aspects.

Keywords: bariatric surgery; Body contouring; Obesity.

INTRODUCTION

Bariatric surgery, a procedure frequently adopted by obese patients aiming at significant weight loss, presents, however, as a counterpart the manifestation of excess skin, notably in the abdominal region, lower and upper limbs (JIANG, Z. et al., 2021). Regardless of lifestyle, dietary or physical activity modification measures, the management of this excess skin represents a pipe dream, affecting a third of those undergoing this procedure (TOMA, T. et al., 2018). In this context, it is observed that approximately 75% of patients after bariatric surgery aim to undergo body contouring plastic surgery, however only 11% actually proceed with such an intervention

(UIMONEN, M. et al., 2021).

According to Vries CEE, et al. (2020), patients undergoing body contouring surgery demonstrate substantial improvement in physical performance and vitality after eliminating excess skin, with an outcome that results in more pronounced weight loss compared to those who underwent bariatric surgery alone. Together, there are considerable improvements in the perception of body image, sexual function, pain relief and self-esteem (TOMA, T. et al., 2018). These advantages are endorsed by Jiang Z., et al. (2021), when noting a reduction in the incidence of anxiety and depression disorders among patients undergoing the combined approach.

The research by Buer L., et al. (2022), highlights the importance of including emotional variables in the evaluation of candidates for Body Contouring Plastic Surgery, since self-image stands out as a critical element to be taken into consideration during the preoperative evaluation. This approach, in addition to improving the surgical outcome, must also be considered in the holistic context of the patient. Based on the aforementioned research, Buer L., et al. (2022), reports the perpetuation of improvements in the mental health of patients undergoing the procedure.

The fundamental purpose of this literature review article is to dissect the clinical indications, surgical techniques and results of body contouring plastic surgery in patients who have undergone bariatric surgery, as part of the treatment aimed at substantial weight reduction. This work aims to provide updated and pragmatic information for health professionals and patients who express an interest in body contouring plastic surgery after bariatric procedures. With this approach, the aim is to facilitate evidence-based decision-making, while optimizing the experience and clinical outcomes of these patients.

METHODOLOGY

This study constitutes a bibliographic review carried out based on the criteria of the PVO strategy, an acronym that represents the analysis of the Population or Research Problem, Variables and Outcomes. This methodological approach was applied based on the following research question: "Do body contouring surgeries impact the quality of life of patients undergoing bariatric surgery?". In terms of the PVO strategy, the population or research problem of this study includes patients who previously underwent bariatric surgery and sought body contouring surgeries after the procedure, with a favorable prognosis. The literature search was conducted in the PubMed Central (PMC) database and used a combination of descriptors, including "Body contouring surgical techniques," "plastic surgery," "satisfactory results," and "bariatric surgery", using the boolean operator "AND". This initial search resulted in the identification of 18 articles, which were subsequently subjected to selection criteria.

The inclusion criteria adopted comprised: articles written in English published in the last 5 years; that addressed the themes relevant to this research, including meta-analyses and literature reviews and the articles available in full. The exclusion criteria include articles that did not directly address the central research did not meet the other inclusion criteria. After meticulous application of these criteria, a total of 13 Articles were selected from the PubMed database to compose the present study, providing a valuable contribution to the assessment of the impact of body contouring surgeries on the quality of life of patients after bariatric surgery.

DISCUSSION

BODY CONTOURING TECHNIQUES AFTER BARIATRIC SURGERY

These studies converge on the importance of body contouring surgery in the post-bariatric context, addressing not only the physical dimension, but also the emotional and bureaucratic aspects that influence decision-making by patients.

Derderian SC, et al. (2020) highlight that, despite the numerous benefits of bariatric surgery, patients often face challenges related to excess skin and soft tissue post-procedure. This condition can result in functional impairment, affecting aspects such as mobility, dermatitis and ulcerations. Studies indicate that approximately 95% of adult patients seek plastic surgery for body contouring, with panniculectomy proving effective in resolving these problems, thus offering significant improvements in quality of life. Buer L., et al. (2022) analyzed patients undergoing post-bariatric body contouring surgery, identifying distress related to body image and symptoms associated with depression. This finding highlights the importance of integrated approaches, considering not only physical but also psychosocial aspects, in post-bariatric treatment.

Vries CEE, et al. (2020) provide insights into the factors influencing the decision to undergo body contouring surgery after bariatric surgery. Research reveals that only half of patients who sought plastic surgery underwent the operation. Bureaucratic issues with health plans emerge as the main barrier, despite evidence of benefits for patients. Those who wanted the procedure, but did not undergo it, showed varying weight regain. Body contouring surgery, therefore, not only meets aesthetic needs, but also serves as a motivator for maintaining or improving weight loss, even in the face of bureaucratic challenges.

This multifactorial aspect highlights the need for more accessible approaches to this type of procedure, considering its positive impact on patients' general health.

The study by Jiang Z., et al. (2020) stands out for its comprehensive approach, screening almost 2 thousand articles and analyzing 24 studies with around 7 thousand participants. The finding that 20% of post-bariatric patients opted for body contouring surgery, predominantly abdominal, is significant. The results reveal substantial improvements in quality of life, covering aspects from body image to psychosocial functions. This research highlights the positive impact of this aesthetic procedure on patients' lives.

Pajula S., et al. (2022) adopted a retrospective approach, studying almost 8 thousand patients in Finland. Surprisingly, only about 14% of these patients opted for lower body contouring surgery. The average interval of 2 and a half years between surgeries raises reflections on the factors that influence the search for post-bariatric aesthetic procedures. This research provides valuable insight into the relatively low demand for body contouring surgeries in this specific context.

Amarin MN, et al. (2023) presents an important perspective by exploring the reality in Jordan. The observational study, with almost 300 participants, reveals that less than 3% opted for body contouring surgery after bariatric surgery, mainly due to financial barriers and fears of complications. The relevance of this study is highlighted by emphasizing the need to improve the doctor-patient relationship and adopt more inclusive approaches, recognizing socioeconomic disparities and promoting equal access to post-bariatric aesthetic treatments.

RESULTS AND QUALITY OF LIFE AFTER PROCEDURE

After achieving a significant reduction in body weight, the presence of flaccid skin folds in various anatomical regions is common. Despite prior instruction on the possible occurrence of excess skin tissue as a result of bariatric intervention, scientific literature highlights that a considerable portion of individuals undergoing such a surgical procedure are not psychologically prepared to deal with the adverse implications on their image-related perceptions. body (BOCCHIERI, LE et al., 2022). As a result, these patients often maintain high expectations regarding body contouring surgery, often harboring aspirations for smaller body dimensions than those achievable through said surgical treatment (SARWER, DB., POLONSKY, HM, 2016).

A critical analysis of the literature reveals that some studies have not identified significant disparities in the quality of life of individuals undergoing body contouring surgery, especially in relation to their perception of body image. This is largely due to the notable variations observed in the idealization of the desired body type and the actual outcome obtained after the surgical procedure (AMARIN, MN et al., 2023; AITZETMÜLLER, MM et al. 2022). On the contrary, it is imperative to highlight that, in contrast to these outcomes, a series of scientific investigations have shown a considerable improvement in self-esteem and self-perception of body image in patients who underwent body contouring surgery after experiencing substantial weight reduction (AZIN, A. et al., 2014; CORIDDI, MR et al., 2011; LAZAR, CC, 2009).

In the context of the emergence of postoperative complications, scientific literature reveals that the duration of surgical intervention is associated with an increase

in morbidity, especially when the operation lasts for a period of more than three hours. The incidence of these complications can vary substantially depending on the specific type of surgical procedure performed (KRISTA, L. et al., 2014). In line with the findings, Vasilakis V., et al. (2021), in a comprehensive retrospective study that analyzed medical records of patients undergoing abdominoplasty, circumferential elevation in the lower region of the body, panniculectomy with the “fleur de lis” technique (FDL) and circumferential FDL, identified a significant association between surgical operations lasting more than six hours and a high incidence of complications, including infections, seromas, necrosis or wound dehiscence, in addition to the need for subsequent surgical procedures. Additionally, a case-control study conducted with patients undergoing surgical procedures in several plastic surgery centers demonstrated that a surgical time exceeding four hours represents the main risk factor for the emergence of adverse complications (SALDANHA, OR et al., 2014).

Bennett BL, et al. (2022) conducted a study addressing body image concerns in individuals who sought post-bariatric body contouring surgery, focusing on the resulting physical changes. Participants expressed several concerns that impacted various aspects of life, such as relationships, social interactions and physical activities, generating suffering and affecting daily activities. The main concern was the presence of loose skin, outweighing concerns about scarring. Common concerns included body dissatisfaction, discomfort in public and post-surgery hair loss. Analyzes revealed that greater worries were associated with greater overall disability in several areas of life, including social participation and impact on work. More pronounced physical changes were related to less social participation. Furthermore, greater body dissatisfaction was

associated with greater weight loss and eating disorders, highlighting the complexity of the interactions between body image and mental health post-bariatric surgery.

Considering post-bariatric surgery skin laxity as a frequent need, it is important to note that body contouring surgery can lead to common complications, such as seromas, infections, hematomas and wound dehiscence, as well as less frequent complications, such as venous thromboembolism, lymphedema, significant asymmetry and neuropathy. It is notable that, over the last decade, complication rates have decreased due to the greater experience of surgeons and the improvement of surgical techniques, although they still remain at considerable levels (MAROUF, A.; MORTADA, H., 2021).

Additionally, Elfanagely et al. (2020) carried out a study to compare the results in quality of life after body contouring surgery in post-bariatric patients. Individuals with obesity and morbid obesity have experienced improvements in quality of life after body contouring surgery. However, morbidly obese patients were observed to have significantly smaller improvements in specific domains such as body satisfaction, body image, and social functioning. This suggests that non-morbidly obese patients enjoyed greater benefits in quality of life post-body contouring. It was highlighted that post-bariatric body contouring surgery can be performed safely in obese and morbidly obese patients, without increasing the risk of serious complications.

In the study on concerns about body image after bariatric surgery, participants reported concerns, such as body dissatisfaction and embarrassment in public, showing an association between these concerns and a greater impact on daily life and social participation. More pronounced physical changes were linked to less participation in society. This highlights the importance

of appropriate interventions to improve quality of life post-surgery, although study limitations, such as sample size, must be considered (VRIES, CCE et al., 2020).

Research highlights that excess skin after bariatric surgery can severely limit mobility and freedom of movement, impacting quality of life. The study, based on Body-Q, presents comparable data on satisfaction and quality of life in patients undergoing body contouring procedures, indicating significant improvements, especially in the abdomen and thigh regions. Furthermore, it emphasizes the need to consider not only medical indications, but also the clear benefits of these procedures for patients after massive weight loss (JIANG Z., et al., 2021).

By comparing the effectiveness of the PEAK Plasma Blade technique with conventional electrosurgery in post-bariatric abdominoplasties, the study highlights the significant reduction in complications such as tissue damage, seroma and wound healing problems. However, serious cases are mentioned in the PEAK Plasma Blade group, emphasizing the influence of factors such as BMI and smoking on complications. The research highlights the importance of the surgical technique in reducing complications in post-bariatric patients (BENNETT, BL et al., 2022).

In the postoperative analysis of patients undergoing abdominoplasty after massive weight loss, complications such as seroma, infections and skin necrosis were identified. There was no significant association between BMI and the incidence of complications, but more extensive surgeries increased the risks. The study highlights the need for future controlled research and highlights the importance of considering specific complications in post-bariatric patients (MAROUF, A.; MORTADA, H, 2021).

FINAL CONSIDERATIONS

Current knowledge about body contouring plastic surgery in post-bariatric patients highlights the numerous improvements in quality of life, self-image and mental health. However, areas that require further investigation include comprehensive patient assessment, preoperative emotional variables,

and bureaucratic challenges to access. These topics require more comprehensive research and are essential to support safer, evidence-based decisions. Therefore, this study reinforces the importance of body contouring surgery in these cases, covering not only the physical aspect, but also the emotional and psychosocial aspects of the patients.

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