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The background of the cover is a blue-tinted photograph of a surgical team in an operating room. A large yellow circle is positioned in the upper left, and another yellow circle is in the lower right. A circular inset in the upper left shows a close-up of a surgical incision being made.

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DONUT MAMMOPLASTY AS A TREATMENT OF FIRST DEGREE PTOSIS IN A YOUNG MAN: A CASE REPORT

¹Rico Ikhsani, ²Benni Raymond

¹Resident Departement General Surgery, Faculty of Medicine Andalas / M. Djamil Hospital, Padang, Indonesia

²Department of Plastic Surgery, Faculty of Medicine, Andalas University/ M. Djamil Hospital, Padang, Indonesia

Background: Massive weight loss often leads to changes in breast shape and ptosis, which can significantly impact patients' quality of life and self-esteem. Donut mammoplasty, or circumareolar mastopexy, is a surgical technique commonly employed to address mild to moderate ptosis while minimizing scarring. However, its efficacy and outcomes in cases of first-degree ptosis following massive weight loss remain underexplored.

Methods: We report the case of a 18-year-old male with complaints of sagging and drooping of his chest wall skin. The patient exhibited marked breast ptosis bilaterally, with the nipple-areolar complexes positioned below the inframammary folds, and no palpable glandular tissue. The patient underwent donut mammoplasty.

Result: The surgical procedure was successful in addressing the patient's concerns, achieving elevation and reshaping of the breasts with minimal scarring.

Conclusion: Donut mammoplasty represents a valuable surgical option for men with first-degree ptosis following massive weight loss, offering favorable aesthetic outcomes with minimal scarring. Further studies with larger cohorts and longer follow-up periods are warranted to validate the efficacy and safety of this approach in this specific patient population.

Keywords: saggy breast; mammoplasty

INTRODUCTION

After massive weight loss, deformities of the breast which become saggy and ptotic commonly become a concern for a patient. This condition affects patient's self-confidence due to the change of their physical appearance.¹ Breast ptosis or saggy breast, refers to a condition where the nipple rotates inferiorly and drop below the immobilized fold. The most common classification of ptosis is Regnault's classification, who divides breast ptosis into true ptosis, glandular ptosis and pseudoptosis. The right procedure of mastopexy is selected based on the grade and patient's desired. It requires a combination of clinical evaluation, surgical skill, and attentive communication with the patient, all of which play crucial roles in achieving the desired cosmetic results and improving the overall well-being of those seeking treatment.²

CASE PRESENTATION

A 18-year-old male presented to general surgery outpatient installation with complaints of sagging and drooping of his chest wall skin. He reported a remarkable weight loss of 50 kilograms over the past 12 months through diet modification and regular exercise. The patient stated that he had previously been diagnosed with class I obesity, with a body mass index (BMI) of 34 kg/m², but had

since achieved a BMI of 19,6 kg/m². He denied any history of hormonal abnormalities, anabolic steroid use, or significant medical illnesses.



Figure 1. Physical examination of the patient with breast ptosis bilaterally

On physical examination, the patient exhibited marked breast ptosis bilaterally, with the nipple-areolar complexes positioned below the inframammary folds. There was no palpable glandular tissue or suspicious masses. The skin appeared lax and redundant, with no signs of inflammation or ulceration. The remainder of the systemic examination was unremarkable. Laboratory investigations, including hormone assays (testosterone, estradiol, prolactin), were within normal limits. Mammography and ultrasound of the breasts were performed to rule out underlying malignancy or significant glandular hypertrophy. Imaging studies revealed predominantly fatty breast tissue with no evidence of suspicious masses or architectural

distortions.

Based on the clinical history, physical examination findings, and investigative results, the patient was diagnosed with moderate breast ptosis / saggy breast grade 1, secondary to weight loss-induced adipose tissue reduction. Given the significant ptosis and the patient's desire for aesthetic improvement, surgical intervention was recommended. Preoperative marking were made on nipple areola complex and marked 2 cm.



Figure 2. Preoperative marking

The patient underwent bilateral mastopexy (breast lift) with donut mammoplasty surgery technique and nipple-areola complex repositioning.



Figure 3. Intraoperation with donut mammoplasty surgery technique

The patient was followed up regularly postoperatively. He reported high satisfaction with the cosmetic outcome with elevation of the breast mound and improved chest contour, both of the mammary areola was found to be in a normal position. Patient experienced no significant complications during the recovery period.



Figure 4. Post operation

DISCUSSIONS

Male breast ptosis is an uncommon condition that can occur secondary to various etiological factors, including obesity, aging, hormonal

imbalances, and weight loss. While gynecomastia, characterized by glandular proliferation, is frequently encountered in obese individuals, breast ptosis primarily attributed to weight loss is less reported in the literature. After massive weight loss, patients often need body contouring that involves more than one step to fulfil their wishes, including breast repair surgery. In some cases, a special treatment need to be done to repair the breast, because sometimes simple surgical procedures do not provide the desired results ever since there are various classification of breast ptosis, Reynault's classification for breast ptosis is most widely used and is described in table 1.³⁻⁵

Table 1. Reynault's Classification for Breast Ptosis.^{3,5}

Classification	Explanation	Treatment : based on patient's preference
Minor ptosis (first degree)	Nipple at inframammary fold . Classical breast hypertrophy or volume excess	• larger breast : augmentation with circumareolar mastopexy • Same breast size : circumareolar mastopexy • Smaller breast : Small reduction. Mammoplasty :Inverted T / vertical scar pattern
Moderate ptosis (second degree)	Nipple below inframammary fold, but above lower breast contour	• larger breast : Augmentation with mastopexy • Same breast size : Mastopexy with vertical scar pattern • Smaller breast : glandular reduction • Mastopexy : circumareolar scar pattern
Severe ptosis (third degree)	Nipple below inframammary fold and at lower breast contour	• Augmentation or augmastopexy with pedicled tissue • Augmentation or



		augmastopexy with free tissue transfer • Augmentation or augmastopexy with implants
Glandular ptosis	Nipple above inframammary fold, but breast hangs below fold	• Usually repaired like minor ptosis/first degree
Pseudoptosis	Nipple above inframammary fold, but breast is hypoplastic and hangs below fold	• larger breast : Bipolar augmentation • Same breast size : Small resection • Smaller breast : Inframammary wedge excision

The patient was diagnosed with minor ptosis / first degree ptosis with the nipple-areolar complexes positioned below the inframammary folds because of a massive weight loss. Based on literature, it requires 2 cm nipple elevation with mastopexy or mammoplasty as its surgical management with or without augmentation. While moderate ptosis need 3-4 cm nipple elevation and severe ptosis need more than 4 cm nipple elevation.⁶⁻⁸

One of cosmetic surgical procedure is mastopexy, a procedure that will make breast and nipple elevate into a more satisfactory. The objective of breast lift surgery is achieving a more youthful and firm appearance through reshaping the breast tissue and tightening the sagging skin envelope. This procedure aims to preserve the blood supply to the nipple and areola while minimizing visible scarring and it's important to note that there is no perfect approach to fix breast ptosis. Circumareolar (donut mammoplasty), circumvertical and inverted T are the basic technique that still widely used. result.^{3,6,9}

Donut mastopexy using the circumareolar technique will give an impressive surgery outcome, because it is less invasive and have low rate of complication with minimal hematoma formation. Many surgeons use this techniques for minor ptosis and provides results that most patients want, which is hiding the scars at the areolar border. After removing the skin, the outer edge of the dermis is

marked, and the layer beneath the skin is carefully loosened all the way around to ensure the skin can be properly readjusted over the underlying tissue. The skin between the outer and inner circles is then stripped of its outer layer. Finally, a circular suture is utilized to close the incision around the areola.⁷⁻⁹

Although literature stated that circumareolar technique can reduce the visibility of the scar, but a study that conducted by Basim Awan, found that this technique has a less desirable outcome, characterized by scarring caused by excessive tension during closure around the areola, resulting in stretching and distortion of the nipple-areola complex (NAC), flattening of the breast shape, reduction in volume, and an increased need for corrective surgeries.^{6,9}

CONCLUSION

We present a case of male breast ptosis/ Saggy breast grade 2 following significant weight loss. It must be very disturbing due to discomfort and disruption in self-confidence for a young man. A simple operation with minimal complications has to be done to reduce the level of morbidity caused by breast ptosis. The bilateral mastopexy and donut mammoplasty procedure is listed as competence for a general surgeon. Donut mammoplasty can be used with an even distribution in the author's country due to the limited number of plastic surgeons.

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