



Inferior Pole Expansion with Lipofilling for Tuberous Breast Surgery

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Clinical Image

Tuberous breast deformity, originally described by Rees and Aston [1], is a congenital breast anomaly characterized by a constricted base of the breast and one or more of the following: High inframammary fold, areola hypertrophy, pseudoherniation of tissue through the areola, ptosis, hypoplasia, and/or breast asymmetry [2]. The exact prevalence of tuberous breast is a contentious issue. Some authors claim that it affects almost three fourths of the female population [3], while others suggest that it is under a tenth [4]. This estimation is further complicated by the fact that less severe forms might go unrecognized to both patients and surgeons [2]. Indeed, according to some authors this condition might even be present in the male breast [5]. Despite this controversy, what seems clear is that a significant number of patients request for a tuberous breast surgical correction. The underlying anatomical and histological features of tuberous breast have been the subject of several hypotheses, including stronger adherence between the dermis and underlying muscle in the lower quadrants of the breast [6]; weakness in the connective and muscular components of the areola which explain gland herniation [2], abnormal superficial fascia that provides insufficient support [7]. It is helpful in understanding the anomalies that besiege the tuberous breast lower pole to visualize the breast as contained within two fascial envelopes superficially the eponymous superficial fascia, which itself is continuous with Camper's fascia in the abdomen. And posteriorly it lies on top of the pectoralis fascia, it is traversed by suspensory ligaments radiating from the areola, known as Cooper's ligaments, and the areola itself is suspended by its connective and muscular tissue. Restrictive lower pole anatomy whether cause by higher fusion of the superficial and deep layers of the breast fascial pocket, thickened parenchyma superficial or weakened areolar tissue causes the breast to develop in a tubular fashion with enlarged, herniated Nipple Areola Complex (NAC) and insufficiently develop breast mound. Globally the lower pole of a tuberous breast shares many characteristics with a constricted scar. Which renders tuberous breast lower pole susceptible to surgical gestures aimed at achieving tissue expansion. Some of these potential surgical approaches for tissue expansion that may be used in the inferior pole of the tuberous breast are the fascial and parenchymal scoring analogous to releasing a scar, actual prosthetic expansion and undermining with a breast implant and its pocket, local flaps, and lipofilling or fat grafting. Other surgical strategies

OPEN ACCESS

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Received Date: 31 Jul 2021

Accepted Date: 12 Aug 2021

Published Date: 16 Aug 2021

Citation:

Dos Santos B, Ruiz-Castilla M. Inferior Pole Expansion with Lipofilling for Tuberous Breast Surgery. *Clin Surg.* 2021; 6: 3287.

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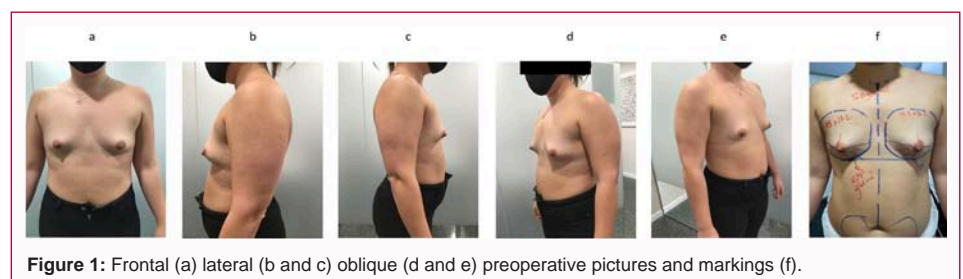


Figure 1: Frontal (a) lateral (b and c) oblique (d and e) preoperative pictures and markings (f).

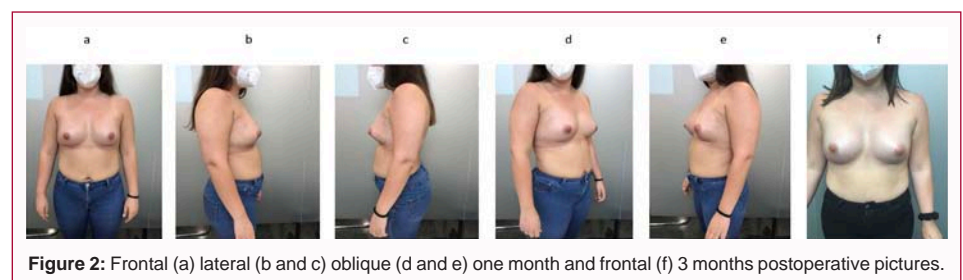


Figure 2: Frontal (a) lateral (b and c) oblique (d and e) one month and frontal (f) 3 months postoperative pictures.

for tuberous breast management are specific to them, such as lowering the inframammary fold to its theoretical location for lower pole development and periareolar access [7]. Following the later rationale, we have included lower pole lipofilling as part of our surgical plan when dealing with tuberous breast. We present the case of a 29-year-old female patient with tuberous breasts with herniated NAC, constricted lower poles and underdeveloped lower medial and lateral quadrants, with relatively symmetric breast. During the consultation, the patient indicated she would not accept scars on the breast or on the areolas, so we performed an inframammary fold approach with cross and radial scoring of glandular tissue and superficial fascia. We also used a subfascial round nanotextured (smooth) breast implant and lower pole lipofilling 50cc per breast to promote proper lower pole development. A 3D simulation tool to both help assess patient anatomy and volumes as well as to present patient with a visual aid to help forward the decision-making process before the surgery was used. Preoperative pictures, including preoperative markings and follow up pictures are shown (Figure 1, 2).

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