Central Mound Mastopexy for the Correction of Tuberous/Tubular Breast Deformity

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Summary: Tuberous and tubular breast deformity are well-recognized abnormalities in the plastic surgery community that incur severe physical and psychological consequences in affected patients. Current reconstructive options for the tuberous and tubular breasts favor the use of prosthetic implants and soft-tissue manipulation. We present a case of tuberous and tubular breast deformity treated with a central mound reduction technique and mastopexy with imbricating sutures without the use of prosthetic implants. The patient remained extremely pleased with her results at long-term follow-up. This represents a unique case of successful reconstruction in a patient with a tuberous and tubular breast deformity using a central mound reduction technique with mastopexy and without a prosthetic device. (Plast Reconstr Surg Glob Open 2017;5:e1545; doi: 10.1097/GOX.0000000000001545; Published online 7 November 2017.)

CASE PRESENTATION

A 24-year-old female with no significant medical history presented to the plastic surgery clinic seeking correction for a severe breast asymmetry (Fig. 1). Her body mass index was 23.6, and her height and weight were 5’1” and 125 pounds, respectively. The patient suffered herniation of the breast parenchyma through the NAC with severe constriction of the base of the right breast (tuberous breast) and a moderate increase in the diameter of the NAC with mild constriction of the base diameter (tubular breast) involving the left breast. The left and right breast base diameters measured 13 cm and 12 cm, respectively. The sternal notch to nipple distance on the left and right measured 26 cm and 24 cm, respectively. The nipple to IMF distance on the left and right measured 9 cm and 8 cm, respectively.

Preoperatively, the patient was marked with an inverted T-incisional pattern (Fig. 2). Intraoperatively, a 42-mm cookie cutter was used to inscribe the NAC followed by deepitheliazation of the central mound bilaterally. The vascularity to the NAC was based on the perforating branches of the intercostal vessels. Base constriction was managed by scoring the undersurface of the breast periphery without violating central parenchymal perfusion. Symmetry was parenchymal scoring, and no implant demonstrating excellent long-term outcome.

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achieved by removing 110 g of parenchyma superiorly and laterally on the left and 27 g of parenchyma laterally on the right. The parenchymal herniation was managed by imbricating sutures placed along the herniated dermis surrounding the periareolar region using a 3-0 monocryl suture to create a tight dermal base and to prevent future areolar herniation (Fig. 3). A closed suction drain was placed.

On postoperative day 1, the NAC was viable bilaterally. The patient was very pleased with her results, and the drain was removed. She remained extremely happy with her results at all follow-up appointments. Figure 4 demonstrates her results at 1.5-year follow-up.

**DISCUSSION**

Tuberous breast deformity arises from a congenital abnormality in the breast’s superficial fascial envelope. During puberty, growing breast tissue herniates through this abnormal fibrous ring toward the NAC causing areolar distention as well as elevation and constriction of the IMF. The tuberous breast spectrum is grossly appreciated as herniated tissue with a constriction in both the vertical and horizontal diameter, although the tubular breast represents a uniquely vertically exaggerated case on the spectrum. The tubular deformity is characterized by a cylindrically shaped breast with a long vertical diameter and a normal or reduced horizontal diameter, a large stretched areola with gross herniated glandular tissue, a small breast base, and an elevated IMF.

Although tubular breast deformity has been studied extensively, no 1 operation has been elucidated as the best reconstructive option. Goals of repair include lengthening and lowering the IMF, releasing the constriction around the NAC, reducing areolar diameter, widening the breast base, restoring breast symmetry and correcting for volume. Mainstay treatment usually involves mastopexy and reduction with resection and reshaping of the breast parenchyma. Implants are usually placed to enhance volume and maintain the new breast contour.

Gasperoni et al. describe a technique of doughnut areolar reduction, freeing of the ligaments of Cooper, creation of a new IMF by undermining skin and soft-tissue superficial to the pectoralis muscle and repositioning of breast tissue to create volume on the inferior base without implants. Persichetti et al. report successful outcomes using the inverted T-approach with a superior pedicle and a deepithelialized inferior flap. There was no comment regarding the use of implants in this series. Mandrekas et al. report successful outcomes using a similar technique of doughnut areolar reduction with a superior pedicle and inferior pole transection to release constricted tissues, with or without implants. Glandular scoring is reported by Kolker and Collins, in combination with transglandular dissection carried out to the retropectoral plane and mastopexy with implants.

To our knowledge, this case report is the first to describe the successful use of central mound reduction technique with dermal scoring and mastopexy with imbricating dermal sutures for the repair of bilateral tubular/tuberous breast deformity, without use of implants. Figures 2 and 3 demonstrate operative technique. The central mound affords vasculature to the NAC and should be considered in patients with tubular breast deformity. Prosthetic implants are not always necessary to achieve an aesthetically appealing outcome with normal volume and shape with long-term follow-up.

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Fig. 3. Drawing of operative technique. Pink denotes deepithelialized skin. Sutures represent the dermal imbricating sutures.

Fig. 4. Postoperative photograph at 1.5 years follow-up.

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