ORIGINAL RESEARCH PAPER

Plastic Surgery

A STUDY ON RESULTS OF REDUCTION MAMMAPLASTY BY SUPEROMEDIAL PEDICLE TECHNIQUE IN A TERTIARY CARE HOSPITAL

KEY WORDS: reduction mammaplasty, vertical scar, superomedial pedicle, inframammary fold(IMF)

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ABSTRACT

Background: The combination of the superomedial pedicle with vertical skin resection has gained increasing popularity for its versatility and ability to achieve significant reduction of breast parenchyma and skin envelope with improved contour and lasting results. Here we reiterate the utility of the superomedial pedicle surgical technique and its outcome. **Study Design:** Retrospective, interventional, institution based, conducted at Apollo Multispeciality Hospitals, Kolkata, India. **Method:** Our study includes 20 patients operated between 2019 – 2022; all patients underwent vertical scar reduction mammaplasty with superomedial pedicles and followed up for 1 year without any bottoming-out or pseudoptosis. Mean specimen weights and complication rates, including seroma, delayed wound healing, nipple loss, infection, and reoperation were recorded. **Conclusion:** The vertical scar breast reduction method with a superomedial pedicle results in a significantly better scar with long-lasting breast projection.

INTRODUCTION

Although the primary intention of breast reduction surgery is to ameliorate symptoms, more women are seeking breast reduction to free themselves from the embarrassment, neck and shoulder pain, and intertrigo that often hinders their daily activities.[1] With the demand of breast reduction on the rise, the expectation from the plastic surgeon is to perform consistent, safe, and complication-free results as well as superior aesthetic outcomes. Vertical scar techniques are inevitably becoming more popular; at the same time, plastic surgeons must remain observant about issues such as safety of the pedicle and preservation of nipple sensation.[2] While planning breast reduction, it is pertinent to understand that the pattern of skin resection and the positioning of the pedicle are two entirely different entities. Most of the skin resection patterns can be combined with most pedicles. However it is usual to position the inferior pedicle with an Inverted T skin resection and a Superior Pedicle or superomedial pedicle with a vertical skin resection.[3] The early complication rate of Inverted-T scar breast reductions are about 20% and a late complication rate of 20–30%.[4]

The use of superomedial pedicle takes full advantage of the robust perforators branching off the internal mammary arteries and provides excellent blood supply to the nipple. These perforators run in the superficial subcutaneous tissue radially, about 1 cm deep to the skin, towards the nipple. This superficial location allows for undermining of the pedicle to assist in rotation without compromising vascularity. Venous drainage is provided by the subdermal plexus, with large veins often visible beneath the skin in such patients with thinned out skin.

The present study was carried out to re establish the advantages of vertical scar breast reduction with a superomedial pedicle.

METHODOLOGY

This retrospective, interventional, institution based study was conducted at the Department of Plastic Surgery, Apollo Multispeciality Hospitals, Kolkata, India. The study period was January 2019 to December 2022. Patients in the age group of 22 - 70 years, presenting with symptoms related to breast weight such as neck, back and shoulder pain, and rashes or bra strap grooves were included in this study.

The procedure starts in the preoperative area with markings in the standing position [Fig 1a, 2a, 3a]. Standard breast landmarks are drawn including the sternal notch, chest midline, inframammary fold [IMF], breast meridian, which may not coincide with the preoperative nipple position, and the breast meridian at the IMF.

Operative Technique

The patient is positioned supine with the arms abducted on the operating table. The breasts are injected with a solution of 250 mL of normal saline, 30 mL of 2% plain lignocaine, and 1 ml of epinephrine. A mosque dome shaped areolar opening is made for the neo NAC. A full-thickness superomedial pedicle is dissected out for the nipple areolar complex, the skin is de-epithelialized, and a rim of tissue is left around the new areolar margin. (Fig 2b) The dissection is carried straight down, without exposing the pectoralis fascia. Above the superior margin of the pedicle, minimal breast parenchyma is removed to allow comfortable positioning of the pedicle. This also helps in retaining the blood and nerve supply to the NAC. The breast tissue is removed en bloc inferiorly, infero-laterally, and infero-medially.(Fig 1b) The resection is bevelled laterally and medially. The pedicle along with the NAC is rotated to about 90° into its new position. The medial and lateral parenchymal pillars are closed with interrupted 3-0 Monocryl sutures.(Fig 3b) Undermining of skin is done upto the inframammary fold to reduce dog ears. Skin is closed in two layers; deep dermal simple interrupted sutures and sub-cuticular sutures with 3-0 Monocryl. Suction drains were placed in all the cases. Patients were discharged the next day with suction drains in situ. Drains were removed when drain output became less than 30 ml/day. All patients were advised to wear an elastic brassiere for at least 3 months postoperatively. Patients were called for follow up on the 5th POD and subsequently at 1, 3, 6 and 12 months. One of the patients developed seroma following drain removal; another patient had minor wound gaping at areolar junction which resolved over time. No complications were noted in rest of the patients.

Table 1

NO OF PATIENTS	20
NO OF BREASTS	40
MININUM SPECIMEN WEIGHT	560 G
MAXIMUM SPECIMEN WEIGHT	2200 G
COMPLICATIONS	SEROMA – 1, MINOR WOUND GAPING – 1

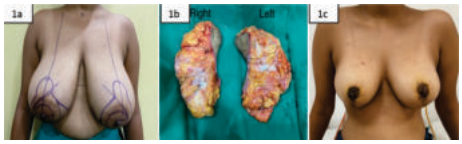

Fig (1a) – Markings In Upright Position, (1b) – Tissue Excised, (1c) – 5th Post Operative Day With Drains In Situ

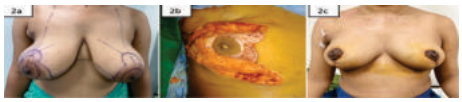

Fig (2a) – Markings In Upright Position, (2b) –

Dermoglandular Pedicle, (2c) – 10th Post Operative Day

Fig (3a) – Preoperative Markings, (3b) – After Suturing The Pillars, (3c) – 10th Postoperative Day

CONCLUSION

There are several benefits of performing breast reduction using the superomedial pedicle technique – it is as reliable as an inferior pedicle but poses no risk of excessive folding or associated puckering when rotating it into its new position. It requires relatively less de-epithelialization than the inferior pedicle technique, thereby decreasing operating room time, yet leaving a pedicle that does not interfere with managing the vertical skin excision. A youthful, aesthetically appealing appearance is achieved by providing good upper pole fullness through its physiologic design and reducing "bottoming out" by supporting the reduction superiorly.

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