



**ORIGINAL RESEARCH PAPER**

**PLASTIC SURGERY**

**OUTCOMES OF VERTICAL SCAR REDUCTION MAMMAPLASTY IN A TERTIARY CARE HOSPITAL**

**KEY WORDS:** reduction mammoplasty, vertical scar, medial pedicle, inframammary fold (IMF)

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**ABSTRACT**

**Background:** In the traditional “Wise pattern” breast reduction procedure, it has been noted that the horizontal inframammary scar is more troublesome than the vertical scar. As for peri-areolar techniques, they often result in scar widening when there is tension on the closure, and the final mound lacks projection, often resulting in a flattened appearance of the breast. Our current study was performed to re establish the excellent results obtained from vertical scar reduction technique. **Study design:** Prospective, interventional, institution based, conducted at Apollo Multispeciality Hospitals Limited, Kolkata, India. **Method:** Our study includes 10 patients operated over a period of 6 months; all patients underwent vertical scar reduction mammoplasty with medially based pedicles and followed up for 1 year without any bottoming-out or pseudoptosis. **Conclusion:** The vertical scar breast reduction results in a significantly better scar with long-lasting breast projection and therefore this technique is justified to remain the standard method at our hospital.

**INTRODUCTION**

Women enquire about breast reduction for both physical and psychological reasons. The most common indication for breast reduction is the relief of physical pain and discomfort associated with heavy, pendulous breasts. Although the primary intention of breast reduction surgery is to ameliorate symptoms, patient satisfaction is also contingent on acceptable aesthetic results. Vertical scar techniques are inevitably becoming more popular; at the same time, plastic surgeons must also remain observant about safety of the pedicle and preservation of nipple sensation.[1] 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 things. 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.[2] The early complication rates of Inverted-T scar breast reductions are about 20% and late complication rates of 20–30%.[3] A strong suture holding the glandular pillars, and an elastic brassiere worn day and night for 2 months postoperatively help to hold the new shape of the breast.[4]

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

**METHODOLOGY:**

This prospective, interventional, institution based study was conducted at the Department of Plastic Surgery, Apollo Multispeciality Hospitals Limited, Kolkata, India. Study period was 6 months, (October 2019 to March 2020). Women in the age group of 25-60 years, attending the outpatient department with symptoms relating to heavy breasts such as neck, back and shoulder pain, rashes and bra strap grooves were included in this study. A detailed medical history, including the age of breast development, previous or anticipated pregnancies or breastfeeding, weight change, history of smoking, and overall medical status was obtained. Measurements were done from the sternal notch to the nipple, position of inframammary fold (IMF) on overlying skin and nipple to the inframammary fold to assess the degree of ptosis and subsequent position of new NAC (nipple areola complex). Medical conditions, such as diabetes and hypertension, were advised to be controlled. Smokers were encouraged to quit four weeks before surgery and were informed of the increased risk of flap necrosis, nipple-areolar complex loss, and delayed wound healing. A mammogram was obtained of those over 40 years of age or with a family history of breast cancer. Informed consent was taken and it was explained that the main disadvantage of this technique is that the final results are not obtained immediately and the

patient has to deal with some amount of wrinkling or dog ear deformity along the lower pole of breasts for the first few postoperative months.

**Operative Technique:**

A mosque dome shaped areolar opening is made for the new NAC.(Figure 1a) A full-thickness medially based 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. (Figure 1b) 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 inseting of the pedicle, making the pedicle superomedial rather than solely medial. [1] 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.(Figure 1c) 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 PDS sutures. Undermining of skin is done till 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. Few interrupted 4-0 Nylon sutures are placed at areas of skin gaping. The vertical length of the scar is gathered so as to minimize the scar length; the lower end is closed in the shape of a small inverted “T” if the scar is too long and encroaches the IMF.(Figure 2a) 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. Nylon sutures if any, were removed on 5th POD. All patients were advised to wear an elastic brassiere day and night for at least 2 months postoperatively. Patients were called for follow up on the 5th POD,(Figure 2b) and subsequently at 1, 3, 6 and 12 months.(Figure 2c) One of the patients developed seroma following drain removal which resolved over time. Another patient had redundant skin in lower pole and did not want to wait for tissues to settle; correction of dog ear was performed in day care sitting at 7 months under local anesthesia. No complications were noted in rest of the patients.

**Table 1 – General Details**

Serial no	Age	Co-morbidity or History of smoking	Weight of tissue excision	Complications
1	27	Hypothyroidism	R-880 gm, L – 790 gm	Skin redundancy in lower pole

2	32	None	R-660 gm, L - 710 gm	NIL
3	33	None	R-670 gm, L - 750 gm	NIL
4	35	Hypothyroidism	R-800 gm, L - 910 gm	NIL
5	38	None	R-680 gm, L - 740 gm	NIL
6	38	Hypothyroidism	R-1110 gm, L - 990 gm	NIL
7	41	Smoker	R-810 gm, L - 760 gm	Seroma
8	44	None	R- 765 gm, L - 840 gm	NIL
9	55	T2DM	R-820 gm, L - 770 gm	NIL
10	57	None	R-920 gm, L - 890 gm	NIL



**Figure 1a – Markings Of Mosque Dome Shaped Skin Excision And Medial Pedicle, 1b – After Excision Of Parenchyma And De Epithelialization Of Medial Pedicle, 1c – Excised Tissues From Each Side.**



**Figure 2a – Immediate Appearance After Closure, 2b – 5<sup>th</sup> Pod, 2c – 3 Months Follow Up.**

**CONCLUSION**

In the vertical reduction technique, the breast tissue is “coned,”[1] bringing in parenchymal tissue from the lateral and medial areas and thereby resulting in improved breast mound and projection. In this case series it is demonstrated that it is the nature of the parenchymal resection, and not the skin brassiere, that determines breast shape and hence prevents pseudoptosis with time.

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