

A Simplified Superior Pedicle Technique for Reduction Mammoplasty

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ABSTRACT

The surgery for hypertrophied breasts represents a challenge for plastic surgeons. When reduction mammoplasty is attempted, the concept of the standard normal breast is to be appreciated. There are three parameters that are involved in determining this concept, namely: Volume, base and projection.

There are two methods of taking areola-nipple complex to their new site in cases of reduction mammoplasty, either by transposing them as a free graft or taking them on a vascularized pedicle flap to the desired position.

In this presentation, the author will show his experience by using the technique utilized in Saint Louis Hospital in Paris.

This technique is superiorly based, without cutaneo-glandular undermining and final closure with an inverted T.

This technique is safe regarding the vascularity of the nipple-areola complex. The procedure produces an excellent breast contour in the absence of cutaneo-glandular cleavage ensues long lasting results and fewer tendencies to secondary ptosis after the procedure.

INTRODUCTION

Surgery for hypertrophied breast represents a challenge for plastic surgeons. The search for a good cosmetic breast has led to the development of many techniques. The aim is to achieve elevated, symmetrical mammae, with round shape, good projection, small cicatrices that are not very perceptible, and a lasting result [1].

Problems were compounded by an inadequate understanding of the vascular anatomy of the breast and in particular, of the nipple areola complex [2]. In the 1960s, a more sophisticated knowledge of the mammary vasculature led to the development of breast reductions based on vascular pedicles. The advent of pedicled techniques greatly improved nipple-aerola complex viability and enabled surgeons to focus on improving cosmetic results. There are two types of pedicled flaps that can be used namely, subdermal pedicles or central breast techniques. The dermal flap can be superiorly based, inferiorly based, vertically bipedicled dermal flaps; or horizontally bipedicled flaps [3,4,5].

In this article, the author will present the results of using the technique of Saint Louis Hospital in Paris. This technique is a superiorly based procedure, without cutaneo-glandular undermining and with final closure with an inverted T [6].

MATERIAL AND METHODS

Markings:

While the patient in the upright position the middle line is marked. A point is marked 5cm from the suprasternal notch laterally over the clavicle. The axis of the breast is marked. It passes from this point to the nipple and continued to the inframammary line (Fig. 1).

Point A lies at the axis of the breast 17-19cm from the suprasternal notch (lower if the breast is large in volume).

The line CD is drawn perpendicular to the axis 5 to 6cm below the point A the ligne CD measures 8-10cm. The three points CAD will form the new aerola site. Then the patient lies down and marking of the lines DB and DC are done. Point D¹ is placed 7cm from point D (Fig. 2).

Operative Details:

The operation is done under general anesthesia. The patient is positioned semisetting with the arms beside the body.

By injecting saline with adrenaline (1:200,000) to minimize bleeding, de-epithelisation is done for the whole dotted area as shown in Fig. (2).

Incisions are done through lines CB and D¹B the inframammary line is incised and the breast is liberated from the pectoral fascia. Incision is made in the dermal flap 1cm below the inferior border of the aerola.

The thickness of this part must be about 1cm (Fig. 3). After resection of the desired part of the gland good haemostasis is done. The aerola is fixed

in its new position by 4-0 proline sutures. The longitudinal scar is then sutured. It measures about 4, 5 to 6cm (Fig. 4) the correction of the dog ear is done at the end, it may help to give more projection of the breast if needed by de-epithelisation of the skin and folding of the glandular tissue under the breast. A suction drain is put under each breast before closure. The skin around the areola is adapted with intradermal resorbable stitches and a running skin suture. The vertical and horizontal incisions are closed with intradermal running suture. The dressing is like a bra and the patient can wear a sport bra after 3 days. The sutures are removed after 10 to 15 days. The patients were followed up for a period ranging 1 to 3 years.

RESULTS

Twenty two reduction mammoplasty were performed using this technique. Their age ranged between 18-45 years. The weight of excised tissue ranged between 600gm to 2 kilo per breast. The areola was at a distance between 26-40cm and post operatively it lies between 18.5-22cm.

The results remained stable in appearance with no ptosis of the breast within the period of follow up. Results are shown in Figs (5-6).

Complications:

No mortality or major complications were encountered in this series. Nipple-aerola complex perfusion was excellent and we never used a free nipple graft. Two patients had minor infection in the wound that resolved with a short course of antibiotic (9.09%). One patient (4.54%) had an open wound at the inferior edge of the nipple-aerola complex that resolved without hypopigmentation or hypertrophic scarring.

DISCUSSION AND CONCLUSION

Reduction mammoplasty as developed to alleviate the physical and psychosocial discomfort associated with macromastia. The evolution of pedicled techniques allowed reduction mammoplasty to become a safer and more reliable operation. Although cosmetic outcomes have improved, patients are sometimes dissatisfied with the resulting scars [7].

Women who carry large breasts are hampered by discomfort, neck ache and backache. The scars are a significant downside to the operation for the surgeon and the patient. This disappointment can be avoided by counseling the patient preoperatively, and it is only because this procedure brings such a relief of symptoms and improvement in self-esteem that on the whole this does not become an

issue [8]. In this series, we used the technique utilized is that of Saint Louis Hospital in Paris. This procedure is a superiorly based pedicled technique without cutaneo-glandular undermining and with final closure with an inverted T. It is safe regarding the vascularity of the nipple areola complex. The procedure produces an excellent breast contour and the absence of cutaneo-glandular cleavage ensures long lasting results and less tendency to secondary ptosis after the procedure. On the other hand, the inferior based techniques, supported only by redraped skin flaps, can bottom out and cause pseudoptosis over time [9].

Many surgeons use the vertical reduction mammoplasty. This technique eliminates the hypertrophic prone inframammary scar and improved breast projection. This procedure has been characterized as difficult to learn and variable in outcome [10].

In other series, a medially or superiomedially based pedicle is uniformly used because this orientation allows removal of the undesirable lower and lateral tissue and produces a natural appearing, medially full breast that retains its shape over time. The resulting cone improves projection and does not rely on the skin envelope to maintain shape [11]. These results are the same as our results. However, it is believed that the vascular supply and innervations of the nipple is preserved as long as a layer of tissue above the pectoralis fascia is maintained [12]. Although this study did not measure nipple sensation outcomes, previous studies have shown that medial and superiomedial pedicles have excellent postoperative nipple sensation [13]. Although some surgeons advocate liposuction particularly in young patients, we avoided liposuction but instead direct aggressive lipectomy of the lateral axillary component and inferior breast pole is done [14]. Although liposuction can improve the axillary roll that is often present, we prefer direct lipectomy to close the lateral dead space and achieve an excellent lateral contour using this technique.

As it is often the case, there is no one technique that suits all. As surgeons, we need to be versed and practised in a range of techniques so that we can tailor the operation to the individual patients requirements.

The technique used in this series is a safe procedure regarding the vascularity. The dermo glandular flap gave in a way suspension to the breast. The resection of the dog ear at the end of the operation gave better results and they could be de-epithelised to give more volume to the breast.

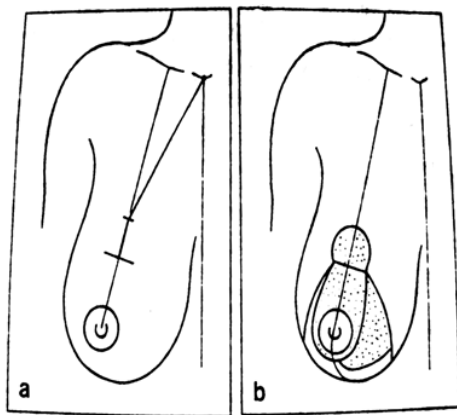


Fig. (1): Preoperative markings. The dotted area represents the area of de-epithelisation (Quotted from Bricout et al., 1988).

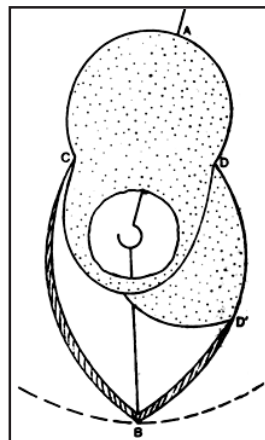


Fig. (2): Incisions of lines CB and DB (Quotted from Bricout et al., 1988).

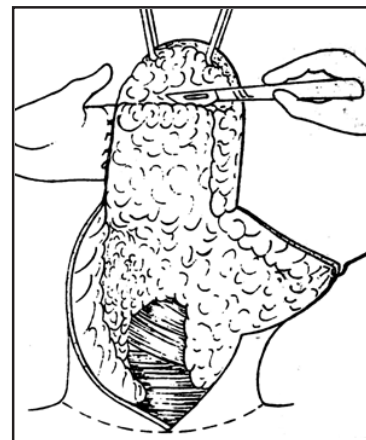


Fig. (3): Glandular resection (Quotted from Bricout et al., 1988).

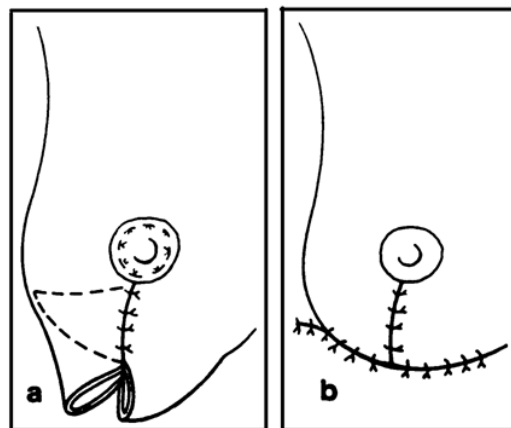


Fig. (4): -A) The areola and the vertical incisions are sutured.
-B) Resection of the dog ears and the horizontal line is sutured (Quotted from Bricout et al., 1988).



Fig. (5-A): Pre-operative lateral view of a patient 45 years old.



Fig. (5-B): Post-operative lateral view of the same patient.



Fig. (6-A): Pre-operative picture of a young girl 20 years old.



Fig. (6-B): Post-operative picture.



Fig. (6-C): Pre-operative lateral views.



Fig. (6-D): Pre-operative lateral views.



Fig. (6-E): Post-operative lateral views.



Fig. (6-F): Post-operative lateral views.

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