

Modified Bipedicle Vertical Breast Reduction: Our Experience in Mammary Reduction of Large Volume Markedly Ptotic Breasts

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ABSTRACT

Reduction mammoplasty for large volume markedly ptotic breast represents a challenge for plastic surgeons. The goal of breast reduction is to reduce the over-all volume of the breast while maintaining a good pleasing shape and viability of the nipple areola complex. The plastic surgeon should choose the incision and pedicle type for breast reduction. Inverted T-scar can be applied to virtually any pedicle, including a superior pedicle, inferior pedicle, a vertical bipedicle, a central mound pedicle, or a superomedial pedicle. Scar pattern and pedicle type are independent, thus, you can have any type of skin incision with any type of pedicle. McKissock described vertical bipedicle technique for breast reduction in 1972.

In this presentation we will show our experience in breast reduction by using modified vertical bipedicle flap for large volume markedly ptotic breast.

This technique is safe regarding the vascularity of the nipple areola complex with good shape and projection of the breast.

INTRODUCTION

The patient with large volume markedly ptotic breast usually complains of chronic back, shoulder and neck pain, upper extremity neuropathy, bra strap grooves in the shoulders, dermatological disorders in the inframammary folds and psychological disorders. Reduction mammoplasty in such a patient represents a challenge for the plastic surgeon and it should improve the patient's complaints, quality of life and the emotional stability [1,2].

In bipedicle vertical breast reduction the breast is reduced to a vertical bipediced flap which extends from the chest wall in the inframammary region, to the upper rim of the new areola window. The vascularity of the flap is provided by the posterior mammary vessels derived from the intercostal arteries. These arteries enter the gland on its posterior surface in the inframammary area.

In bipedicle vertical breast reduction the plan is performed pre-operatively, there are few, if any, decision left to be made at surgery and closure and results in the typical inverted T-scar pattern [3,4,5].

In this article, we will present our experience of using bipedicle vertical breast reduction with some modifications in large volume, markedly ptotic breasts with sternal notch nipple distance >40cm.

PATIENTS AND METHODS

11 mammary reductions for large volume markedly ptotic breasts were performed in the Dammam central hospital, Saudi Arabia last year. The patients' age ranged between 35-49 years, body weight ranged between 70-95kgs and the sternal notch nipple distance was between 39-44cm. The technique used was the vertical bipedicle flap for breast reduction with some modifications for the length of the medial and lateral flaps and the width of the inferior pedicle to increase breast projection and vascularity of the nipple-areola complex.

Preoperative markings:

With the patient fully erect, the central meridian of the breast is established by dropping a line from the midclavicle to the nipple. The inframammary line is also marked throughout its full extent. The line from the midclavicle to the midinframammary line is measured using a pair of obstetrical calipers, this level is transposed to the anterior surface of the breast and marked on the breast meridian and it represents the lower border of the new areola. The exact site of nipple is established by placing the lower edge of the areolar template at the junction of these two lines and marking the new nipple point at its center. The areola is marked using the areola template with a diameter 42mm.

From the mid point of the new nipple site, two lines are drawn downward tangential to the enlarged areola where its pigmentations disappear [3,4,5].

From the point where the areolar window intersects the diverging lines, a distance of 6-7cm is measured downward and marked, this will establish the medial and lateral flap.

This distance is modified from 5cm as in McKissock technique to 6-7cm to increase the length of the medial and the lateral flaps for better breast projection.

From this point, lines are drawn medially and laterally to meet the ends of the inframammary line in a slightly lazy S configuration for proper contouring of the skin envelope. Markings are shown in Figs. (1,2).

Operative technique:

Under general anesthesia with the patient in the supine position and the arms slightly abducted, a solution of epinephrine of 1:200 000 dilution is infiltrated in the sites of incisions and subcutaneously in the area of deepithialization. The areola is incised down to the dermis and the margins of the vertical flaps are incised completing its lines downward to the inframammary line.

The vertical flap is deepithialized in the mid dermis level except the original areola. Full thickness excision of the medial and the lateral triangles down to the thoracic musculature. The superior pedicle is released from the medial and the lateral skin flaps by deep incisions extending around the areola window up to the upper third of the areola window to leave the superior attachment of some 3-4cm width [3,5].

Modification of McKissock technique is done for the width of the inferior pedicle to make it 9-10cm instead of 7-8cm in McKissock to improve the vascularity of the vertical flap.

Further tissue is then resected from beneath the medial and the lateral skin flaps and from beneath the superior pedicle while the inferior pedicle will remain full thickness. At this point the flap should be a true bucket handle attached superiorly to the areola window and inferiorly to the thoracic wall.

The vertical flap is folded upward upon itself and suturing the areola into its window.

The medial and the lateral skin flaps are approximated in the mid line over the vertical flap and closure is performed from the medial and the lateral ends towards the center to excise any skin excess.

Skin closure should be done by the use of removable sutures [3,4,5]. Hemovac drain is inserted in each site and out through the lateral extent of the sub mammary wound. The suture line is dressed with a Fucidin sofratulle light dressing and criss-crossing plaster is applied to provide support without compression. The drains are removed after 48 hours and the patient is allowed to go home.

The subcuticular sutures can be removed after 2 weeks, the wound left undressed and the patient instructed to wear a supportive bra continuously for six weeks.

RESULTS

11 mammary reductions for large volume markedly ptotic breasts were performed using bipedicle vertical flap. Their age ranged between 35-49 years. The sternal notch nipple distance was between 39-44cm and postoperatively it lay between 22-24cm. The weight of the excised tissue ranged between 1.4-2.4 Kilo per breast. During the follow-up period the breast remained stable, no ptoses with good projection. Results are shown in Figs. (3-6).

No mortality or major complications were encountered in the patients [6].

Viability of the nipple-areola complex was excellent and no free nipple-areola graft was used [7].

Minor complications in the form of hypertrophic reaction in the midline scar in one patient treated by topical corticosteroid scar massage. Slight dropping of the left nipple in one patient.

Generally the patient satisfaction for the 11 cases was excellent.

DISCUSSION

Surgery for large volume markedly ptotic breast represents a challenge for the plastic surgeon. The search for a good result has resulted in development of many breast reduction techniques. The pedicle flap technique still is the most popular and safe technique [8,9]. Women with large volume markedly ptotic breasts complain of chronic back, shoulder and neck pain, upper extremity neuropathy, bra strap grooves in the shoulder, infra mammary dermatological disorders and psychological disorders. Reduction mammoplasty for such patients with large volume markedly ptotic breasts will relieve the patients' complaints, improve the quality of life and increase the emotional stability [1,2,10].



Fig. (1): Preoperative markings for a patient 49 years.

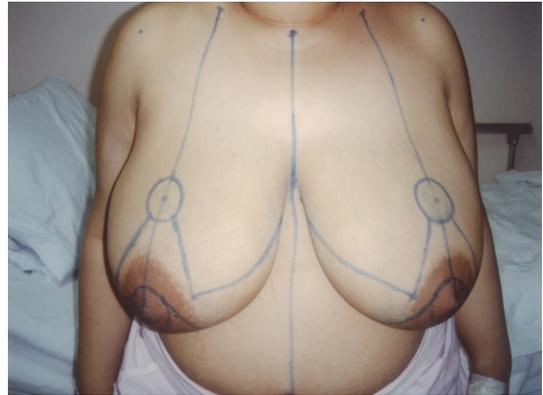


Fig. (2): Preoperative marking of a patient 44 years.



Fig. (3-A): Preoperative for patient 49 years.



Fig. (3-B): Postoperative for the same patient.



Fig. (3-C): Lateral view preoperative for a patient 49 years old.



Fig. (3-D): Lateral view postoperative for a patient 49 years old.

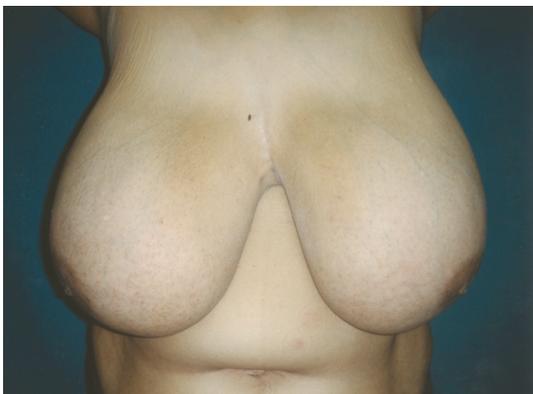


Fig. (4-A): Preoperative for a patient 44 years old.



Fig. (4-B): Postoperative for the same patient.



Fig. (4-C): Lateral view for a patient 44 years old.



Fig. (4-D): Lateral view postoperative for the same patient.



Fig. (5-A): Preoperative for a patient 39 years.



Fig. (5-B): Immediate post operative for the same patient.



Fig. (6-A): Preoperative for a patient 41 years old.



Fig. (6-B): Immediate post operative for the same patient.



Fig. (6-C): Preoperative lateral view for a patient 41 years old.



Fig. (6-D): Postoperative lateral view for the same patient.

For large volume markedly ptotic breasts we used the vertical bipedicle flap with some modifications in the width of the medial and lateral flaps to make it 6-7cm instead of 5-6cm in McKissock technique to increase breast projection and also we increased the width of the inferior pedicle to make it 9-10cm instead of 7-8cm in McKissock technique to improve the flap vascularity.

We did 11 cases with large volume markedly ptotic breasts and the results were excellent with very good patient satisfaction.

Conclusion:

Despite the many recent techniques in breast reduction, the inverted T-scar technique remains a comfortable and predictable technique for the plastic surgeons. The bipedicle vertical breast reduction with the modifications has proven to be a reliable and safe technique for large volume markedly ptotic breast with excellent physical and psychological outcome.

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