New trends in breast reconstructive surgery: “Florentine Lily” reductive mastoplasmy

M. ROGLIANI, P. GENTILE, A. TRIMARCO, L. LABARDI, L. BRINCI, L. PALLA, V. CERVELLI

Department of Plastic and Reconstructive Surgery, University of Rome “Tor Vergata”, Rome (Italy)

Abstract. – Background: To describe a mammoplasty technique that we called “Florentine Lily” because of the shape of the pre-operative drawings similarity with the symbol lily Florentine.

Methods: In a group of 190 women who underwent reductive mammoplasty, 23 women affected by severe enlarged breasts were selected. Main selection requirements were: 18-30 cm rising of the Areola-Nipple Complex (NAC).

Results: to obtain a functional and cosmetic result; preservation of mammary gland function; vitality of the areola-nipple complex and its sensitivity. We describe the case of 35 years old woman affected by severe enlargement of the breast and without any pathologies.

Conclusion: We didn’t observe necrosis of the skin flaps and NAC in any case. In one case (rising of Nipple-Areola Complex >25 cm) NAC showed NAC 2 days post-surgery, which spontaneously resolved. Minor complications (edema and ematoma) developed in 20 cases. No infections were observed.

Key Words: Mammoplasty, Areola-nipple complex, NAC, Breast hyperplasia.

Introduction

Reduction mammoplasty is one of the most performed operation in plastic surgery: shape, size, consistency, level of ptosis affect posture (lordosis, kiphosis) social life and self-esteem of women1,2. We describe a mammoplasty technique that we called “Florentine Lily” because of the shape of the pre-operative drawings. We selected, in a group of 190 women who underwent reductive mammoplasty, 23 women affected by severe enlarged breasts. Main selection requirements were: 18-30 cm. rising of the Areola-Nipple Complex (NAC) to obtain a functional and cosmetic result; preservation of mammary gland function; vitality of the NAC and its sensitivity. We describe the case of 35 years old woman affected by severe enlargement of the breast and without any disease.

Materials and Methods

23 women were selected between January 2005 and June 2009 in a group of 190 women waiting for reductive mammoplasty to be performed at the Department of Plastic and Reconstructive Surgery, Policlinico Casilino, University of “Tor Vergata”, Rome, Italy.

They all showed severe breast hyperplasia, the need to rise the NAC³ 18-30 cm, the need to preserve its sensitivity and vitality and the breast feeding capacity, being of childbearing age. Therefore, they were all suitable for our “Florentine Lily” technique. In the second group we select a 35 years old healthy women with severe breast hyperplasia, The age range was 25-50, average range 40. All patients underwent a clinical exam of the breast, ultrasound examination and eventually, if suggested by the previous exams, mammography or magnetic resonance of the breast. Pictures were taken in three standard projections (frontal, lateral and ¾). We have confronted our technique to other reductive mammoplasty techniques including: by Planas, Torek, Mec Kissock, Bisemberg, Strombeck, Skoog and inferior and superior peduncles flap reductive mammoplasty4-6. We planned post-surgical follow-up at 1-3-6 weeks, 3-6-12 months, and then once a year for 4 years.

Statistical Analysis

Values are shown with standard error of mean as error bars. Results were analyzed by means of
Student’s t-test. The differences were considered statistically significant for $P<0.05$.

**Results**

We treated 23 patients, applying our technique “Florentine Lily”, average age 30, average follow-up 23 months after surgery. We didn’t observe necrosis of the skin flaps and nipple-areola complex in any case. In one case (rising of Nipple-Areola Complex > 25 cm) NAC showed NAC 2 days post-surgery, which spontaneously resolved. No anti-clutter prophylaxis was administered post-surgically. Minor complications (edema and ematoma) developed in 20 cases, no infections.

**Discussion**

We describe a new reductive mastoplasty technique called “Florentine Lily” because of the shape of the pre-surgical drawings. We selected, from a group of 190 women who underwent reductive mastoplasty, 23 cases presenting breast hyperplasia, suitable because of: young age, the need to preserve breast-feeding capacity and an enlarged breast needing 18-30 cm rising of NAC. From 23 cases we selected a 35-year-old woman presenting severe breast hyperplasia.

**Pre-Surgery Drawings**

The importance of pre-surgery drawings can never be emphasized enough. A correct pre-surgery planning is very important to realize our technique, based on very precise drawings.

We mark the **J** point on the jugular dimple, the **E** point on the emiclavicle line (6 cm from the J point), a median line **M** from the jugular point to the umbilicus. Two more lines are drawn in correspondence of the mammary folds **S**, the **C point** is 10-12 cm from the median line, a line **H** goes through the NAC-emiclavicle point- and the **C** point, a point tangentially crossing **G-H** 18-22 cm from the **J** point, is the **P** point where the Wise pattern is finally drawn. We mark a flap starting from the mammary fold to the NAC with a base never smaller than 8 cm and an adequate apex, two flaps starting from the vertical branches of the Wise pattern to the NAC and at last a flap from the future site to the actual site of NAC.

**Technique**

Following the pre-surgical drawings we proceed to the incision of the skin and skimming of the predetermined area. The incisions deepen in the inferior-lateral and inferior-medial quadrant, leaving untouched the inferior median portion, previously skinned. The inferior-lateral and inferior-medial quadrants are removed partially depending on the amount of gland needing to be removed. In the superior part of the skinned area we proceed to the incision going from the new NAC location to the NAC to create 3 petal-like flaps, converging centrally from the border of the skinned area following the pre-surgical drawings by Wise. Leaving the NAC solidly anchored to the underlying gland we detached the superior pole of the gland from the dermis, reaching the
fascia of the great pectoral muscle, resulting in three dermal strings converging centrally from the borders to the NAC to form a flower pattern and a fourth dermal string, un-detached from the gland portion converging to the NAC. Results a Lily-like structure formed by a stem made of a dermis-gland string, three petals made of dermal

strings converging centrally on the NAC and a central button formed by the intact NAC strongly attached to the gland because of the intact galactophorous ducts. The dermal-skin flap obtained is closed on the underlying gland. Pen Rose drainage are positioned and kept in site for 3 days average.

We have confronted our technique to other currently used techniques: Torek, Planas, cobra flap and vertical and horizontal double flap reuctive mammoplasty[4-6]. There are three major advantages that convinced us to perfect and ap-
ply more often the previous technique: Blood supply, Sensitivity and Functioning. In the Lily technique three dermal bridles going from the periphery to the NAC like petals in a flower and a fourth dermal strip not detached from the gland and still converging to the NAC permit the optimal blood supply proved by the absence of post surgery partial or total NAC necrosis. Like in other techniques lack of sensitivity is only partial and when present is limited to few weeks after surgery, depending on the level of mammary gland swinging and a to better-preserved blood supply of the area. Complete preservation of the milking ducts permits breast-feeding.

Conclusions

Major features of this technique are: preservation of a good blood supply, due to 4 dermal flaps and one dermal-gland flap, preservation of milky ducts and the contiguity of NAC to the underlying gland, the mammary gland is still connected to the great pectoral muscle fascia, suspension of gland by few nylon stitches to the great pectoral muscle fascia at the level of the second intercostals space. This surgery technique should be preferential to others when the patient presents a severe breast enlargement with severe ptosis in any kind of patients (even in former obese or non obese). Advantages of the technique are: vitality of the NAC even in cases with rising of NAC 30 cm from jugular dimple, totally preserved sensitivity and breast-feeding.

References