CODEN [USA]: IAJPBB ISSN: 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES
http://doi.org/10.5281/zenodo.2556795

Available online at: http://www.iajps.com *Review Article*

COMPARISON OF OUTCOMES IN SUPEROPEDICLE & INFEROPEDICLE TECHNIQUE OF BREAST REDUCTION SURGERY: A RETROSPECTIVE REVIEW

[1]Feras Altumaihi, [2]Raied Oufi, [3]Razan Altumaihi, [4]Basim Awan

[1]Department of Plastic & Reconstructive Surgery, King Abdulaziz University Hospital "KAUH", Kingdom of Saudi Arabia – Jeddah.

Abstract:

Purpose: *The preservation of the nipple-areola complex after reduction mammoplasty is the ultimate goal. The aim of this paper is to compare the inferior with the superior pedicle based on age, wound healing, NAC to identify which technique is more reliable aesthetically.*

Method: *Using the Semmes-Weinstein monofilament the sensitivity was evaluated in 20 patients underwent a bilateral reduction mammoplasty: 10 were treated with inferior pedicle technique and 10 with a superior pedicle technique. The test areas were the nipple, the four quadrants of the areola and the 4 quadrants of the breast skin at 24 months postoperatively.*

Results: *The major alterations were noted in women treated with superior pedicle techniques. Minor differences were found in the sensitivity of the breast skin.*

Conclusion: *Inferior pedicle technique is safe and reliable, great wound healing and less complication rate than the superior pedicle technique.*

Keywords: *Mammaplasty, breast reduction, sensation, inferior pedicle, superior pedicle.*

Corresponding author:

Feras Altumaihi,

MD, KAUH, KSA Jeddah

TEL: 00966555611028, EMAIL: f.altumaihi@hotmail.com

QR code

Please cite this article in press Feras Altumaihi et al., ***Comparison Of Outcomes In Superopedicle & Inferopedicle Technique Of Breast Reduction Surgery: A Retrospective Review.,*** *Indo Am. J. P. Sci, 2019; 06[02].*

INTRODUCTION:

Development of techniques for reduction mammoplasty has yielded a number of procedures resulting in acceptable to excellent long-lasting outcomes. Contour and volume of reduced breasts are the major concern for patients as well as surgeons. Macromastia is a condition of abnormal breast tissue overgrowth in excess of the normal percentage. Clinically, it is defined as breast hypertrophy with associated pathologic findings that can impede physical activities [1]. Neck, back and shoulder pain, recurrent maceration and infection at the inframammary fold of the breast, social and psychological conditions are also quite irritating for women with extremely large breasts [2]. Nevertheless, it is contraindicated in certain patients in particular smoker, diabetic, obese.

The etiology of macromastia is undetermined yet, However, hormonal excess and hypersensitivity of the target organ play a major role. In some cases, Hyperprolactinaemia has been reported and Immunological factors have also been seen in patients with Myasthenia gravis, Chronic arthritis, and Hashimoto thyroiditis.

Breast reduction surgery, also known as reduction mammaplasty, is a procedure used to eliminate excess fat tissues and skin from the breasts. It helps improve self-image and the ability to abolish physical difficulties. Patient satisfaction has been reported at relatively high levels from 86%-95% [3]. Currently, many breast reduction techniques have been identified and each of them has particular advantages and disadvantages [4].

METHOD:

A most common fact or belief known after doing the procedure is that there is little or no recovery of sensation in the nipple-areolar complex. We set up a retrospective study to compare nipple-areolar sensation after breast reduction by the inferior and superior pedicle techniques. We reviewed 20 patients after 2 years of the procedure and measured the nipple and areolar pressure sensibility in each breast with Semmes-Weinstein monofilaments. An updated version of von Frey's horse hairs. These monofilaments are flexible nylon rods of different diameters, which is calibrated to apply a distinct force on the test area.

The test area was lightly touched with the tip of a monofilament. The patient, with the head tilted, was instructed to say 'yes' or 'no' depending on whether she acknowledge any feeling or sensation by a particular filament. Four points corresponding to the compass were measured and the centre of the nipple. The higher the pressure threshold of the test area, the lower was its sensitivity.

RESULTS:

The majority of patients of both groups experienced an improved breast skin sensation but nipple sensation being superior in the inferior pedicle group. The mean areolar pressure threshold in the inferior pedicle group was 33.28 g/mm2, while that in the superior pedicle group was 28.21 g/mm2. This difference was not significant [P = 0.139]. The mean nipple pressure threshold in the inferior pedicle group was 12.65 g/mm2 as compared to 18.75 g/mm2 for the superior pedicle group. This means that the nipples in the inferior pedicle group were considerably more sensitive due to the greater number of nerves involved in inferior pedicles.

Mean reduction weight was 650g per breast, ranging from 200 to 1200g. The overall complication rates were low, minor complications related to delayed wound healing. No cases of skin necrosis or wound dehiscence occurred. Increased complications were highly associated with a gland reduction weights > 850g, BMI > 30, smokers.

Upper pole fullness was maintained in follow-up. Significant bottoming out was observed in 2 cases of the superior pedicle. No skin excess was seen at the inferior fold region in any of the cases.

Postpartum breast alteration, weight change, and aging can also contribute to recurrent ptosis.

DISCUSSION:

Breast reduction surgery is a safe procedure with a relatively high level of patient satisfaction. In all the techniques defined for this procedure, the ultimate goal is to eliminate the physical and psychological problems of the patients and have a long-lasting pleasing shape. Preservation of areolar sensation is a secondary consideration.

Inferior pedicle technique was defined in the mid 70s and still currently one of the most commonly performed technique [5].

It has been shown to be consistently reliable. A distinct advantage of this technique is that it often preserves the deep branch of the lateral cutaneous branch of the fourth intercostal nerve which is the main nerve to the nipple and areola. The neurovascular association of the breast has been variably identified in the second to the sixth intercostal space. Knowledge of this anatomy is essential to maintain a safe procedure without injuring any essential structure lying in the area.

The intercostal nerves pass through the breast tissues to reach the nipple-areola complex in a way to be preserved within the inferior pedicle. Nerves to the areola can be injured during pedicle dissection or thinning, which evolve an early reduction of the nipple-areola complex sensation. The extent of the regeneration of the severed cutaneous nerve is not yet understood. However, it plays a role in the final recovery of sensation in the nipple-areola complex.

The nerve branches found in inferior pedicles were commonly located within a fibrous tissue, whereas those found in superior pedicles were noted within fatty glandular tissue.

Good vascularity of the pedicle and maintaining of the sensation of the nipple areola complex make this technique reliable even with cases of a high amount of gland resection. Besides these advantages, the risk of the hypertrophic extensive scar, development of bottoming out or recurrent ptosis and inability to maintain breast contour in the long term due to loss of upper pole fullness remains an issue [6].

The straight vertical pedicle technique is best reserved for those patients with less BMI and less ptosis. The scar tissue at the junction of the areola where maximal tension is often encountered may prevent nerve regeneration. In previous studies, loss of nipple and areolar sensation, necrosis of nipple or pedicle, wound dehiscence, loss of erotic function and inability to lactate were reported in superior pedicle technique [7].

Wound dehiscence, particularly at the inverted T junction, depends on many factors such as wound infection and tension of the wound edges. This condition interferes with normal wound healing by disorganizing the physiological cellular continuity of events and the tension-induced vascular compromise. Risk factors for wound dehiscence include smoking, obesity, increased gland resection, and prolonged anesthetic time.

CONCLUSION:

Mammoplasty techniques aspire to obtain a final aesthetic breast contour. The most difficult issue after surgery is to maintain an upper pole fullness of the breasts and preventing recurrent ptosis. Reduction mammaplasty techniques using the inferior pedicle is safe and reliable, preserve the nipple and areolar complex and lower complications rates.

Disclosure

No conflicts of interests with respect to the authorship or publication of this article.

REFERENCES:

1. Gonzalez F, Walton RL, Shafer B, Matory WE, Jr, Borah GL. Reduction mammaplasty improves symptoms of macromastia. Plast Reconstr Surg. 1993;91:1270–1276. [PubMed]
2. Cho MJ, Yang JH, Choi HG, Kim WS, Yu YB, Park KS. An idiopathic gigantomastia. Ann Surg Treat Res. 2015;88:166–169. [PubMed]
3. Davis GM, Ringler SL, Short K, Sherrick D, Bengtson BP. Reduction mammaplasty: long-term efficacy, morbidity, and patient satisfaction. Plast Reconstr Surg. 1995;96:1106–1110. [PubMed]
4. Dabbah A, Lehman JA, Jr, Parker MG, Tantri D, Wagner DS. Reduction mammaplasty: an outcome analysis. Ann Plast Surg. 1995;35:337–341. [PubMed]
5. O'Grady KF, Thoma A, Dal Cin A. A comparison of complication rates in large and small inferior pedicle reduction mammaplasty. Plast Reconstr Surg. 2005;115:736–742. [PubMed]
6. Hidalgo DA, Elliot LF, Palumbo S, Casas L, Hammond D. Current trends in breast reduction. Plast Reconstr Surg. 1999;104:806–815. [PubMed]
7. Mandrekas AD, Zambacos GJ, Anastasopoulos A, Hapsas DA. Reduction mammaplasty with the inferior pedicle technique: early and late complications in 371 patients. Br J Plast Surg. 1996;49:442–446. [PubMed]