Commentary on: The Central Pillar Technique: A New Septum-Based Pedicle Design for Reduction Mammaplasty

Elisabeth Würinger, MD

In “The Central Pillar Technique: A New Septum-Based Pedicle Design for Reduction Mammaplasty,” Dr Bayramiçli used a cadaver model study to visualize a superficial venous drainage route from the periareolar venous plexus to the medial and lateral drainage veins and a deep venous system, which accompanies the deep arterial system. As the critical link between those 2 drainage routes, the author identified a hexagonal-shaped periareolar vein polygon and assumed that this polygon should completely be preserved in the new septum-based pedicle (“central pillar”) design.

Le Roux et al recently explored the venous drainage of the breast by radiographic and cross-sectional studies. They demonstrated that the dominant veins communicate with the valveless superficial subareolar plexus of veins by reduced-caliber choke vessels or through true anastomoses. They stated that this network of oscillating veins allows the venous drainage to be redirected to the main draining veins, provided at least 1 of the main draining veins is maintained.

Taylor et al examined full-body cadavers through radiography and dissection of the venous network. Within the breast, they found large directional veins draining the subcutaneous layer and smaller perforating veins draining the deep surface of the breast. Between these valvular veins, they found a rich network of oscillating valveless veins that interconnect and allow free flow between adjacent venous territories.

In his cadaver study, Dr Bayramiçli could not visualize oscillating veins; the explanation given is that the valves at the angles of the vein polygon prevented further flow. Perhaps the different results were attributable to the higher viscosity of the radio-opaque material, whereas Le Roux et al adopted injection techniques previously used to study very fine lymphatics. The free flow within the periareolar oscillating venous plexus would make the author’s claim of protecting the whole vein polygon questionable. Regardless, the larger the periareolar deepithelialization, the more secure the procedure. The size of deepithelialization should be in proportion to the size of the breast. In larger breasts, the main venous drainage is more spread out, with the main draining veins located further from the nipple-areola complex (NAC).

In our investigations, the ligamentous suspension was found to be the guiding structure for the main neurovascular supply to the nipple. We focused on the course of the nervous and arterial system, thereby relying on the often-reported experience that the venous drainage predominantly follows the arterial system. The author also describes the drainage routes, which match the routes of arterial supply as we found them. We found 2 systems of supply: the central supply along the horizontal septum and the supply along the capsule of the breast, which both merge in the periareolar plexus. Either pathway is sufficient to drain the nipple.

These 2 main pathways of supply of the NAC in breast reductions are also stressed in the current article. In his technique, Dr Bayramiçli employs the central pedicle supplied by the horizontal septum. The planning largely correlates with the design I published in 1999, with a modification (the extended Schwarzmann maneuver) that permits protection of the entire superficial vein polygon. The author notes that, in my technique, the large periareolar deepithelialization was for gland shaping and that only by chance was the critical vein polygon saved. This difference accounts for the author’s creation of the new technique.

Although central pedicle techniques do not rely on a dermal pedicle, it is still essential to preserve the superficial periareolar vascular networks by deepithelialization. In accordance with our anatomical investigations, I severed the dermal connections of the inferior pedicle at the inframammary fold to establish a centrally based pedicle. The dermis thereby lost its vascular function (as with the inferior pedicle) and was used as a dermal brassiere to prevent sagging of the breast, which actually is an issue in this technique. In a book on vertical scar mammoplasty, I stated emphatically that apart from maintaining the tender neurovascular network within the periareolar dermis, I

Dr Würinger is a plastic surgeon in private practice in Vienna, Austria.

Corresponding Author:
Dr Elisabeth Würinger, Herrengasse 6-8, 5, 1010 Vienna, Austria.
E-mail: dr@wueringer.net
deepithelialization of the pedicle is not important for the supply of the nipple.

A major difference between the 2 techniques is the dissimilar handling in the region of the inframammary fold and the inferior glandular layer.6-9 Here I dissect very carefully to avoid injury to the main nerve. In the author’s series, the number of insensate nipples or nipples with moderate sensitivity is not high but could be reduced further. As noted by the author, a major drawback of his central pillar technique is the sacrifice of all large superficial veins. I now use a variation of my technique,6,9 which allows additional preservation of the essential medial parts of the superficial neurovascular supply. It combines the principle of medial pedicle rotation described by Hall-Findlay10 with preservation of the horizontal septum and thereby represents a combination of the two main supplying routes. Contrary to the author’s experience, I did not notice any vascular compromise by rotation. The advantages of this principle have been confirmed by other authors.11-14 It also allows ease in shaping the breast, with minimal tendency for ptosis or bottoming out.

In contrast to my experience, the author did not note bottoming out of the central pedicle as a problem, even though initial bottoming out can be observed in 1 of his patients (Figure 12). His report includes a sizable number of patients with adequate results and a reasonable number of complications. Interestingly, there were two cases of transient venous congestion. Dr Bayramiçli began with application of the technique in only cases of gigantomastia, where consideration to anatomical factors is even more stringent. With more experience, the indications were widened to include smaller resections.

Based on this report and further positive experiences with respecting the role of the ligamentous suspension irrespective of technical details,11-17 breast reduction may be performed more reliably. The concern of surgeons over nipple viability, the proposition of free nipple graft techniques in young women, and statements such as “My patients don’t care about postoperative sensibility” should be history.

Disclosures
The author declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

REFERENCES