

Application of Pedicled Perforator Flaps in Large Cavities of the Breast

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Abstract : Objective-Reconstruction of large cavities of the breast without contralateral symmetrisation Background-Reconstruction of breast includes a wide spectrum of procedures from displacement to regional and distant flaps. The pedicled Perforator flaps cover a wide spectrum of reconstruction surgery for all quadrants of the breast, especially in patients with comorbidities. These axial flaps singly or adjunct are based on a near constant perforator vessel, a ratio of 2:1 at its entry in a flap is good to maintain vascularity. The perforators of lateral chest wall viz LICAP, LTAP have overlapping perfuroosomes without clear demarcation. LTAP is localized in the narrow zone between the lateral breast fold and anterior axillary line, 2.5-3.8cm from the fold. MICAP are localized at 1-2 cm from sternum. Being 1-2mm in diameter, a Single perforator is good to maintain the flap. LICAP has a dominant perforator in 6th-11th spaces, while LTAP has higher placed dominant perforators in 4th and 5th spaces. Methodology-Six consecutive patients who underwent reconstruction of the breast with pedicled perforator flaps were retrospectively analysed. Selections of the flap was done based on the size and locations of the tumour, anticipated volume loss, willingness to undergo contralateral symmetrisation, cosmetic expectations, and finances available. 3 patients underwent vertical LTAP, the distal limit of the flap being the inframammary crease. 3 patients underwent MICAP, oriented along the axis of rib, the distal limit being the anterior axillary line. Preoperative identification was done using a unidirectional hand held doppler. The flap was raised caudal to cranial, the pivot point of rotation being the vessel entry into the skin. The donor area is determined by the skin pinch. Flap harvest time was 20-25 minutes. Intra operative vascularity was assessed with dermal bleed. The patient immediate pre, post-operative and follow up pics were compared independently by two breast surgeons. Patients were given a breast Q questionnaire (licensed) for scoring. Results-The median age of six patients was 46. Each patient had a hospital stay of 24 hours. None of the patients was willing for contralateral symmetrisation. The specimen dimensions were from 8x6.8x4 cm to 19x16x9 cm. The breast volume reconstructed range was 30 percent to 45 percent. All wide excision had free margins on frozen. The mean flap dimensions were 12x5x4.5 cm. One LTAP underwent marginal necrosis and delayed wound healing due to seroma. Three patients were phyllodes, of which one was borderline, and 2 were benign on final histopathology. All other 3 patients were invasive ductal cancer and have completed their radiation. The median follow up is 7 months the satisfaction scores at median follow of 7 months are 90 for physical wellbeing and 85 for surgical results. Surgeons scored fair to good in Harvard score. Conclusion- Pedicled perforator flaps are a valuable option for 3/8th volume of breast defects. LTAP is preferred for tumours at the Central, upper, and outer quadrants of the breast and MICAP for the inner and lower quadrant. The vascularity of the flap is dependent on the angiosomal territories; adequate venous and cavity drainage.

Keywords : breast, oncoplasty, pedicled, perforator

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