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Bipedicle-conjoined perforator flaps in breast reconstruction



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ABSTRACT

Background: For some patients seeking autologous breast reconstruction, there may be insufficient abdominal skin and soft tissue to reconstruct an adequately sized breast. Perfusion from a single-pedicle deep inferior epigastric perforator artery flap has a high degree of variability across the midline, and this further limits perfusion. We have found that bipedicle-conjoined abdominal perforator flaps are a novel and reliable technique for reconstruction in these women, and this study examines our experience.

Materials and methods: A retrospective review was performed over a 2-y period of bipedicle-conjoined abdominal perforator flaps in 28 patients. For each reconstruction, the pedicle of one flap was anastomosed to the anterograde internal mammary artery vessels and the pedicle of the second flap to a side branch of the primary flap or the retrograde internal mammary vessels.

Results: Mean age and body mass index were 50.2 y (standard deviation, 8.0) and 25.9 kg/m² (standard deviation, 2.8), respectively. In total, 15 patients (53.6%) received radiation therapy before surgery. There were no flap losses; fat necrosis was found in one flap (3.2%). The large contiguous skin island of the bipedicle-conjoined deep inferior epigastric perforator flaps allowed for extensive replacement of damaged or absent breast skin when necessary. Aesthetically satisfactory results were achieved in all patients.

Conclusions: Bipedicle-conjoined abdominal perforator flaps represent a novel technique in select patients seeking breast reconstruction. The added complexity was safe and reliable in this series of patients. Compared to unipedicle flaps, the increased skin and volume allow greater flexibility to achieve the desired shape and projection.

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