



NEW YORK REGIONAL SOCIETY OF PLASTIC SURGEONS

2018 RESIDENTS' NIGHT ABSTRACT

Abstract Submission: J4 (Group 2)

Title: *Tripediced Extended Abdominal Perforator Flap: An Alternative for Low Body Weight Patients Requiring Large Autologous Bilateral Breast Reconstruction*

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PURPOSE: Autologous breast reconstruction is challenging in thin patients who present for bilateral breast reconstruction. The Stacked Hemi-abdominal Extended Perforator (SHAEP) flap has been shown to increase the volume of useable abdominal tissue by adding a secondary, more lateral pedicle to the DIEP. We present a novel approach to obtaining even more volume by adding another pedicle to the SHAEP. This is the first description of the Tripediced Extended Abdominal Perforator (TEAP) flap that allows for use of the entire circumference of the lower trunk by adding two additional pedicles to the DIEP.

METHODS: To perform the TEAP flap, circumferential body lift principles are followed in order to recruit more lower truncal tissue. The flap consists in an extended DIEP flap with three pedicles. Preoperative MRA is performed in order to localize vessels. The main pedicle is the deep inferior epigastric artery perforator. Two additional perforators are used, the most common being the deep circumflex iliac artery (DCIA) and the superficial inferior epigastric artery (SIEA). The lumbar artery perforator (LAP), the superficial circumflex iliac artery (SCIA) and the intercostal perforators (IP) can also be used. The DIEP pedicle is harvested with additional branches, and length on the superior continuation. The two additional pedicles are anastomosed on a back table to these branches using couplers for arteries and veins. The DIE artery and vein are then anastomosed to the internal mammary artery and vein. We analyzed our case series evaluating patient demographics, surgical techniques, operative time and complications.

RESULTS: Six TEAP flaps were performed by two surgeons, on three patients undergoing bilateral breast reconstruction. A total of 6 anastomosis with 3 pedicles were performed for each breast reconstruction. Three flaps included one DIEP pedicle, one SCIA and one SIEA. One flap included one DIEP, one SIEA and one DCIA pedicle. Another flap included one DIEP pedicle, one SIEA and one Intercostal perforator and the last one included one DIEP pedicle, one DCIA and one LAP. The additional pedicles allowed for an average of 45% more volume than the DIEP alone. All flaps were successful with a mean follow up of 154 days (60-225 days).

CONCLUSIONS: The TEAP flap is a novel procedure that avails the microsurgeon of the use of the entire abdominal circumference of the thin patient for use in breast reconstruction, providing total autologous breast reconstruction with increased volume, enhanced flap perfusion, and muscle preservation.