

Samantha Morin / Devin Melancon

T3/L4

Tulane University School of Medicine, New Orleans, LA

LSU Health Sciences Center, New Orleans, LA

Daniel Yoo, MD / Richard F. Guidry, MD

PGY-5/ PGY-4

LSU Health Sciences Department of Plastic Surgery, New Orleans, LA

Hugo St. Hilaire, MD, DDS, FACS /Robert Allen Sr., MD

LSU Health Sciences Department of Plastic Surgery, New Orleans, LA

Stacked Superior Gluteal Artery Perforator (SGAP) Flaps for Unilateral Breast Reconstruction

Background: With an increasing demand for autologous breast reconstruction, improved microsurgical techniques and new reconstructive options have been developed; however, there are still obstacles in performing these procedures with patients with suboptimal fat distribution or when typical donor sites are not available. Such populations include patients with low BMIs or prior history of abdominal surgery in which the gold standard of the deep inferior epigastric perforator (DIEP) flap is not a viable option. Stacking the superior gluteal artery perforator (SGAP) flap may be a feasible alternative that provides adequate breast projection in unilateral breast reconstruction.

Methods: A case series of unilateral breast reconstruction with stacked bilateral SGAP flaps was performed on three patients. Their results were compared and contrasted to the previously described version of the stacked inferior gluteal artery perforator (IGAP) flap for unilateral breast reconstruction. Factors like aesthetic appeal, complexity and technicality of the surgery, and postoperative pain were all taken into consideration.

Results: While performing stacked SGAP is technically demanding, requires two position changes (supine, prone, supine) increasing operative time, and has a short pedicle often requiring dissection of the lateral perforator to obtain increased pedicle length, and results in notable scar on the superior buttock, it does provide an alternative for unilateral breast reconstruction in thin candidates or who do not qualify for abdominally based flap harvest. It is associated with decreased early postoperative pain as compared to the IGAP that causes substantial discomfort when sitting and may increase dehiscence rate. Furthermore, this reconstructive procedure provides a balanced and aesthetically pleasing donor site. The three patients who underwent surgery with an uncomplicated postoperative course and satisfactory results.

Conclusion: The stacked SGAP flap is a favorable option in patients with suboptimal donor site mass. The technique provides acceptable cosmetic results in both the primary breast reconstruction and donor site. With a bilateral harvesting, the stacked SGAP provides the necessary bulk for reconstruction of a moderate profile breast with a symmetrical and balanced gluteus left behind.

