Journal of Plastic, Reconstructive & Aesthetic Surgery (2013) 66, 845—847

JPRAS
An International Journal of Surgical Reconstruction
www.JPRASurg.com

CASE REPORT

Augmented SIEA flap for microvascular breast reconstruction after prior ligation of bilateral deep inferior epigastric arteries

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Received 2 May 2012; accepted 10 September 2012

KEYWORDS
Breast reconstruction;
SIEA;
Delay technique;
Microvascular;
Deep inferior epigastric vessels

Summary The superficial inferior epigastric artery (SIEA) flap is an excellent option for free tissue transfer breast reconstruction. Similar to the free transverse rectus myocutaneous (TRAM) and deep inferior epigastric perforator (DIEP) flaps, the SIEA pedicle supplies the fasciocutaneous tissues of the lower abdomen. The SIEA flap does not involve removal of or potential damage to the rectus muscles. Nonetheless, the vascular pedicle may be a challenge to dissect and variable in its presence and caliber. This article presents a case report and an extended delay technique to augment the SIEA system in a patient with prior bilateral deep inferior epigastric artery ligation.

Case presentation

History

The patient is a 36 year old female (otherwise healthy, non-smoker, BMI 31.5) who underwent a right mastectomy (see Figure 1) approximately 1 year prior to first evaluation at our institution. Reconstruction was deferred due to concerns that post-operative radiation would be needed, but eventually adjuvant radiotherapy was not necessary. At an outside hospital the patient underwent a delay procedure with bilateral ligation of the deep inferior epigastric arteries in preparation for a pedicled TRAM reconstruction. The patient then decided to pursue DIEP flap breast reconstruction based on her desire to pursue an autologous muscle sparing/donor site preserving operation. Her previous delay procedure excluded this possibility. A CTA of the abdomen was performed which exhibited a present SIEA system but also robust perforators emanating from the

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http://dx.doi.org/10.1016/j.bjps.2012.09.010