Epigastric Perforator Flap Breast Reconstruction Following Deep Inferior Epigastric Source Vessel Ligation

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Financial Disclosure

Nothing to disclose
Introduction

Deep inferior epigastric perforator flaps represent an excellent method for autologous breast reconstruction.

Success is predicated upon careful dissection of dominant perforators.
Objective

- The ligation of the source vessel should negatively impact flap harvest

- If collateral vessels maintain patency of the DIE source artery and vein, DIEP flap harvest may be possible
Methods

A retrospective review of two cases of bilateral DIEP breast reconstruction was performed following prior ligation of the DIE source vessels.

The findings were analyzed and recorded.
Results

The first patient had multiple failed attempts at bilateral breast reconstruction in a previously irradiated field.

She also had a previous bilateral salpingo-oopherectomy via a Pfannenstiel incision, which ligated both of the DIE source vessels.
Results

- Intercostal collaterals near the old hemoclips maintained source vessel patency and bilateral DIEP reconstruction was successful
Results

The second patient had prior bilateral breast reconstruction with submuscular implants complicated by late unilateral infection.

She underwent a prior delay procedure for possible pedicled TRAM flap reconstruction at an outside institution.
Results

- CT angiography for a possible GAP flap revealed patent DIE vessels of suitable caliber despite clips near the origin.

- Bilateral DIEP reconstruction was performed without associated complications.
Bilateral periumbilical perforators were present with continuity to the DIE source vessels and hemo clips near the iliac vessels.
CT angiography

Patent deep inferior epigastric arteries and veins
Hemoclips at origin of DIE vessels

Flap based on perforator vessel
Conclusion

Successful DIEP flap reconstruction depends upon the patency of the DIE source vessels and sufficient perforators.

Prior ligation of the source vessel should negatively impact successful flap harvest.
Conclusion

- DIEP flap reconstruction can be carried out successfully if collateral vessels maintain patency of the source vessel.

- Radiologic imaging can be helpful to identify these cases.