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present when tested with a 25-gauge needle stick. The rhinoplasty was postponed, and the patient was monitored in the recovery room for several hours. No signs of local tissue compromise were noted, and the patient underwent an uneventful rhinoplasty 6 weeks later.

Phenylephrine is used in compound topical anesthetic preparations,² for vasoconstriction of mucosal membranes, as a decongestant nasal spray, and as a mydriatic to facilitate funduscopic examination. The systemic uses of phenylephrine include intravenous administration for alpha-agonist effects in severe hypotension. Because of its strong alpha-agonist effects, direct injection into tissue is usually avoided, with the exception of treatment for priapism.³ There is limited literature on the effects of extravasation of vasopressors into local tissue. In 1957, one of the earliest reports of vasopressor extravasation and treatment describes an extravasation of levarterenol (an isomer of norepinephrine) through a peripheral intravenous line. This was treated successfully with local injection of phentolamine, and no adverse sequelae were noted.⁴

Since then, reversal and prevention of alpha-adrenergic-induced local ischemia by the administration of the alpha-receptor blocker phentolamine has been described.⁵ In our opinion, prudent steps after inadvertent phenylephrine injection include the following:

- Recognition of the problem and, if possible, cessation of the procedure.
- Consideration for application of nitro paste.
- Consideration for injection of phentolamine to neutralize alpha-agonist effects.
- Appropriate disclosure of the error.

The literature on the local tissue effects and treatment of phenylephrine infiltration is limited. It is important to report these adverse incidents to provide guidance for potential errors.

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DISCLOSURE

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Banking a DIEP Flap in High-Risk Patients: A New Technique during Unilateral DIEP Harvest

Sir:

The deep inferior epigastric artery perforator (DIEP) flap can supply a substantial volume of tissue with low donor-site morbidity. However, where there is a midline abdominal scar, safe use of more than one hemiabdominal wall on a single pedicle is not possible. In this setting, a decision must be made as to the use of the other hemiabdomen. Where additional tissue is of use as a reconstructive flap, the tissue can be supplied by an additional pedicle,^{1,2} as either a two-anastomosis bipediced DIEP flap or a single-pedicle stacked DIEP flap. Where the additional tissue is not needed, it may be discarded.

We describe an additional technique, in which the second hemiabdominal wall can be raised as a DIEP flap and advanced to the midline during closure. By banking a surplus DIEP flap, this “preharvested” flap can be used in a subsequent procedure if needed. Although not routine, we describe a unique case where this additional tissue was required to aid abdominal closure and as a future reconstructive flap in a high-risk setting.

A 43-year-old woman presented for immediate, unilateral reconstruction of her chest wall. Her history included a midline open hysterectomy. She had previously undergone a mastectomy and axillary clearance for breast carcinoma, and presented with a local chest wall recurrence. A biopsy demonstrated mixed ductal carcinoma and lymphangiosarcoma. Staging magnetic resonance imaging scan demonstrated a 7-cm tumor, confined to the chest wall and infiltrating pectoralis major.

Wide local excision of the lesion (including pectoralis major, periosteum, and a single rib) and reconstruction with a DIEP flap were performed, with more skin required than was available from a single hemiabdomen (Fig. 1). Given the previous midline abdominal surgery, a hemiabdominal wall flap was

designed that was too large to facilitate direct closure. A right hemiabdominal DIEP flap was raised and used to reconstruct the chest wall defect (Fig. 2). The deep inferior epigastric artery and single vein were anastomosed to the circumflex scapula artery and vein.

The left hemiabdominal wall was raised as a second DIEP flap and advanced to the midline to aid abdominal wall closure (Fig. 2). This flap was thus available for

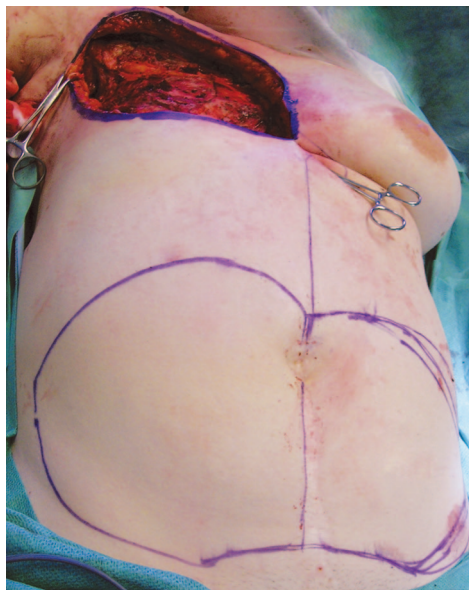


Fig. 1. Chest wall defect after wide local excision of tumor, and abdominal wall flap design, with the right hemiabdomen marked to match the chest wall defect, given the midline scar.



Fig. 2. Intraoperative view of chest wall reconstruction with a right-sided hemiabdominal DIEP flap and closure of the abdominal wall with a left DIEP advancement flap.

future use as a reconstructive flap in the case of further chest wall recurrence.

Direct closure of the abdomen following DIEP flap harvest is essential to achieve good donor-site outcomes. Although few studies have described techniques of closure following DIEP flap harvest, techniques described to improve donor-site outcomes do include anterior rectus sheath plication, external oblique plication, and dermolipectomy.³⁻⁵

Although tension during closure is not sought, some cases often necessitate tight closure and require consideration of alternative options. We describe a new technique to aid abdominal wall closure, in which the portion of the flap not used in the reconstruction is advanced to the midline as a perforator flap, particularly suitable in cases of midline scars.

This DIEP advancement flap has thus been preharvested for subsequent use as a free flap, appropriate in the current case, where the tumor was at high risk for recurrence and subsequent reconstruction may be required.

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