Hidradenitis suppurativa (HS) is a chronic inflammatory condition of apocrine glands that causes devastating physical and psychosocial effects. Also referred to as hidradenitis phlegmonoe, Verneuil’s disease, pyoderma fistulans significal, or acme inversa, HS is a multifocal, inflammatory condition that involves follicular, glandular, bacterial, endocrinologico, environmental, genetic, host defense, and pharmacologic factors. It manifests as recurrent inflammatory follicular nodules, papules, pustules, and painful abscesses with malodorous discharge. The most common areas affected are the axillary and inguinal areas, but other areas include the breast, lower abdomen, perineal, and perianal regions. Although the etiology of the condition is not exactly clear, it is a multifocal disease and has been associated with a family history of HS, cigarette smoking, and obesity and is more common in women than in men. Untreated HS can lead to rare complications as severe as squamous cell carcinoma.

Management of HS ranges from topical or systemic medication to surgery, depending on the severity of HS with each patient. In attempts to treat HS medically, relapse is common. Surgery is recommended in severe cases but is often avoided as primary treatment because of large defects and difficulty of surgical reconstruction. However, early and wide excision surgery can be both important and effective in preventing complications, avoiding recurrence, and improving the patient’s quality of life. In removing large areas of skin, wound healing, and its aesthetic outcome, becomes a major concern. Reconstructive options for inguinal and groin defects include secondary healing, skin grafting, and flap closure. Patients undergoing flap surgery as opposed to skin grafts are known to have faster recovery, fewer complications, and fewer overall procedures. Excision surgery using skin flaps has been successful within the axillary region, with procedures commonly using the thoracodorsal artery perforator flap. Published flap choices for pelvic reconstruction currently include the anterolateral thigh flap, the vertical rectus abdominis myocutaneous flap, the gracilis, and the gluteal fasciocutaneous flap. In particular, the anterolateral thigh flap has been used for groin reconstruction in ways that minimize morbidity of donor location and simplify the postoperative course.

PATIENT AND METHODS

The pedicled superficial inferior epigastric artery (SIEA) flap is an unpublished and underutilized alternative in treating inguinal HS. We considered this option in a 41-year-old woman presenting with a 10-year history of refractory perineal and vulvar HS. Her first episode was mild within the perineal area, which resolved after surgical incision and drainage. She remained of usual health, without symptoms of hidradenitis, until 3 years ago. She has since been experiencing purulent hidradenitis scars and lesions. Specifically,
she had significant vulvar and perineal involvement with multiple sinuses in the mons pubis, the right side of the labia majora (Fig. 1). The labia minora, clitoris, urethra, and the perianal area, however, remained uninvolved.

The resection included a near-total vulvectomy and resection of mons and groin skin and subcutaneous tissue. Noting that the patient had adequate abdominal pannus to serve as donor tissue, we designed pedicled SIEA flaps bilaterally measuring 10 × 30 cm (Fig. 2). Before raising the flaps, the SIEA pedicle was dissected and identified. Clinical examination revealed a strongly palpable arterial pulse and an audible Doppler venous signal. After skeletonization of the pedicle, the flaps were rotated into the defect. The flaps were closed in layers with interrupted 2-0 PDS in the deepest layers followed by 3-0 Monocryl for the deep dermis and then a running 4-0 Monocryl in a subcuticular fashion; this was preceded by the placement of 19 Fr Blake drains. Inset was temporarily complicated by venous congestion, requiring further dissection of the pedicle, and near-immediate postoperative return to the operating room for reinsert of the flap. After completion of the closure, the flaps were viable without venous congestion (Fig. 3). There were small areas of secondary healing; however, the flaps survived completely without fat necrosis, seroma, hematoma, or infection.

DISCUSSION

The SIEA flap has been utilized in reconstruction because of its low donor-site morbidity.9 This advantage has led to the SIEA flap composing 35% of all abdominal wall–based breast reconstruction at certain institutions.9 The SIEA flap is a notoriously difficult flap to dissect as a free flap, secondary to variable arterial and venous size and anatomy. In this case, the pedicle identification was performed first, allowing a reliably designed flap. Rotating a perforator flap is also difficult because of pedicle kinking and outflow obstruction. These were encountered in this case secondary to the large size and weight of the flap. They were overcome by persistent and diligent flap monitoring and further dissection of the pedicle. Local flaps can be challenging in reconstruction of large perineal defects, with a major goal of pelvic wound reconstruction being restoration of functions like sexual intercourse and urinary continence.6

This case demonstrates that the SIEA flap can also be successfully used to treat extensive and recurring HS that afflicts the genital and perineal area. Because the SIEA is a branch of the femoral artery and sits within the inguinal region, it allows for careful rotation of a skin flap onto the appropriate area of HS within the nearby inguinal or perineal region. Not only can this be useful in cases of HS but it can also be effective for any groin coverage, such as after lymphadenectomy for cancer, especially in an irradiated area, or after exposure of a vascular graft. In these cases, the SIEA flap is especially useful, as excisions of large areas of skin require extensive coverage in a region that otherwise offers few options for using local flaps in wound healing. The patient has since been debulked once and is satisfied with her reconstruction and donor site (Fig. 4).
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