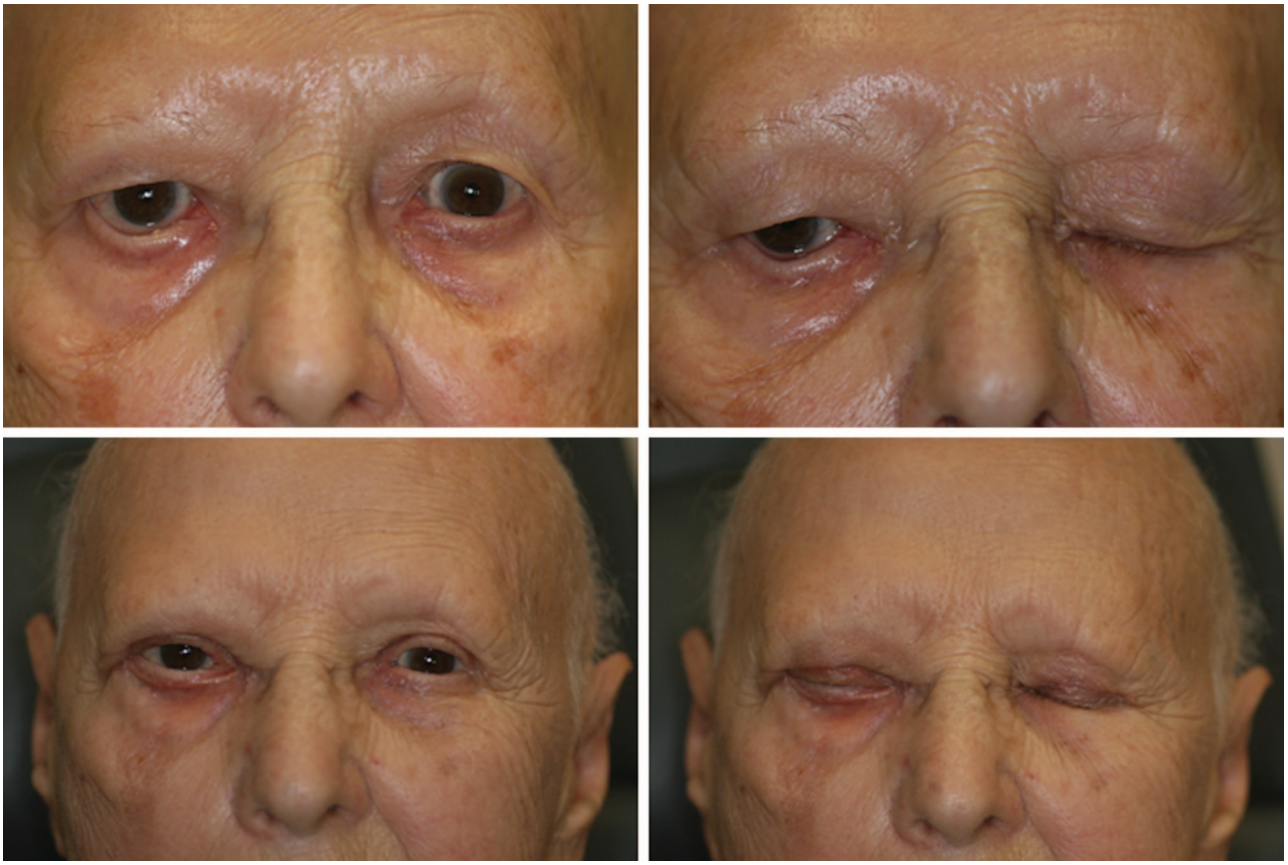

Fig. 2. (*Above*) Preoperative appearance of a patient with right facial palsy after parotid tumor removal. (*Below*) Postoperative views show the patient after right internal eyebrow elevation, bilateral upper blepharoplasty, right upper eyelid gold weight implantation, and right lower eyelid fascia lata suspension for epiphora, eye irritation, and lagophthalmos with a poor Bell phenomenon that does not bury cornea.

University of Southern California, Los Angeles
Los Angeles, Calif.

Correspondence to Dr. Burnstine
Eyesthetica
1513 South Grand Avenue, Suite 200
Los Angeles, Calif. 90015
mburnsti@earthlink.net

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DISCLOSURE

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PATIENT CONSENT

Patients provided written consent for the use of their images.

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A New One-Stage Method for Nose Reconstruction: The Supratrochlear Artery Perforator Propeller Flap

Sir:

The authors propose a single-stage method for nasal reconstruction using a perforator propeller flap termed the supratrochlear artery propeller perforator flap.[1] The supratrochlear artery propeller perforator flap is pedicled on the supratrochlear artery which, together with accompanying veins and the supratrochlear nerve, emerges from the concavity of the inner canthus and

perforates the procerus and corrugator supercilii and nourishes the paramedian forehead skin. A propeller flap based on a constant and conspicuous vessel such as the supratrochlear artery is safe and reliable.

The surgical technique consists of the following. Once the nasal defect is outlined, the supratrochlear artery is identified by means of a Doppler probe and marked on the skin. The flap, centered on this marking, is planned as a skin island composed of two blades, like a propeller: a superior (frontal) blade and an inferior (nasal) blade.

The frontal blade is planned and raised like a conventional forehead flap. The nasal blade includes the skin between the skin marking of the supratrochlear artery and the upper margin of the defect.

Dissection is supraperiosteal except for the distal 2 cm of the frontal blade. Pedicle dissection is performed under loupe magnification: the vessels are identified at their emergence from the orbit and freed from any attachment to the surrounding tissues that might impair rotation of the skin island (Fig. 1).

The flap is left attached only by its pedicle. Rotation of 180 degrees is simulated both clockwise and counterclockwise, and perfusion of the skin and pedicle kinking are checked to determine which rotational direction is better.[2] Once the flap is rotated, the frontal blade covers the loss of substance of the nose, and the nasal blade will partially cover the donor site defect.

The supratrochlear artery propeller perforator flap can be folded double distally to repair the inner layer of the nose in full-thickness defects. Septal flaps or composite grafts[3] can also be used in full-thickness reconstruction.

Fig. 1. Tip and dorsum defect after basal cell carcinoma resection. The propeller is drawn around the pivot point. The higher the defect, the shorter the nasal blade. The flap is harvested as narrow as possible in the pivot point to avoid any excess tissue in this area.

Fig. 2. At 6 months after the operation, there is excellent color match.

Nose reconstruction by means of a supratrochlear artery propeller perforator flap was performed on 15 patients, 10 men and five women, with ages ranging from 62 to 94 years (mean, 75 years). All patients were satisfied with the results (Fig. 2). All of the operations were performed under local anesthesia. The supratrochlear artery propeller perforator flap is a good option for one-stage nose reconstruction and is simpler than other single-stage techniques.[4]

The nasal blade repairs the glabellar area and preserves the normal distance between the brows. Residual scars overlap with the glabellar grooves.

The supratrochlear artery propeller perforator flap is not ideal when an optimal cosmetic result is required, because only a less-than-optimal cosmetic outcome can be achieved in one stage and because subunit reconstruction is necessarily less accurate.[5] The supratrochlear artery propeller perforator flap is not to be considered an alternative to the conventional multistage forehead flap but rather a second choice in cases where the one surgical procedure can be a real advantage.

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Adriana Cordova, M.D.

Salvatore D'Arpa, M.D., Ph.D.

Francesco Moschella, M.D.

Chirurgia Plastica e Ricostruttiva
Dipartimento di Discipline Chirurgiche ed Oncologiche
Università degli Studi di Palermo
Palermo, Italy

Correspondence to Dr. Cordova
U.O. di Chirurgia Plastica e Ricostruttiva
A.O.U.P. Paolo Giaccone
Via del Vespro 129
90127 Palermo, Italy
adriana.cordova.unipa@gmail.com

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Reconstruction of Elbow Flexion by End-to-Side Neurorrhaphy in Phrenic Nerve Transfer

Sir:

Phrenic nerve transfer has been widely used in the treatment of brachial plexus avulsion injuries and has been one of the options for reconstruction of elbow flexion, with biceps strength of M3 or better at 84.6 percent recovery.[1,2] However, concerns regarding potential pulmonary function problems have limited its popularization.[3] Therefore, we considered balancing the restoration of the affected limb and preventing denervation of the ipsilateral diaphragm by end-to-side neurorrhaphy.

In the current study, five consecutive patients (three male patients and two female patients) with brachial plexus avulsion injuries, aged from 6 to 36 years (mean, 18.6 years), were admitted to our hospital and underwent phrenic nerve transfer with end-to-side neurorrhaphy by neurotizing the anterior division of the upper trunk or the musculocutaneous nerve. The operative delay after injury was 1 to 6 months (mean, 2.5 months). In the surgical process, the distal end of the musculocutaneous nerve or anterior division of the upper trunk was sutured to the grafted sural nerve with end-to-end neurorrhaphy, and the other end of the graft was sutured to the side of the phrenic nerve in "helicoid fashion" at the level of the C6 nerve root using

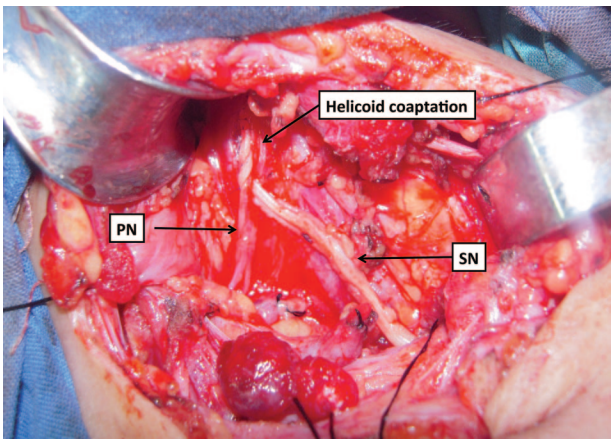

Fig. 1. Intraoperative photograph shows "helicoid coaptation" in the end-to-side neurorrhaphy in phrenic nerve transfer. After an epineurial window was made on the lateral surface of phrenic nerve (*PN*), the distal stump of the musculocutaneous nerve was coapted to the lateral phrenic nerve by means of a 7-cm sural nerve (*SN*) graft using an 8-0 polypropylene suture. The proximal end of the graft was coapted to the phrenic nerve after spirally winding 2.5 cycles along the phrenic nerve to enlarge the contact area (*arrow*).

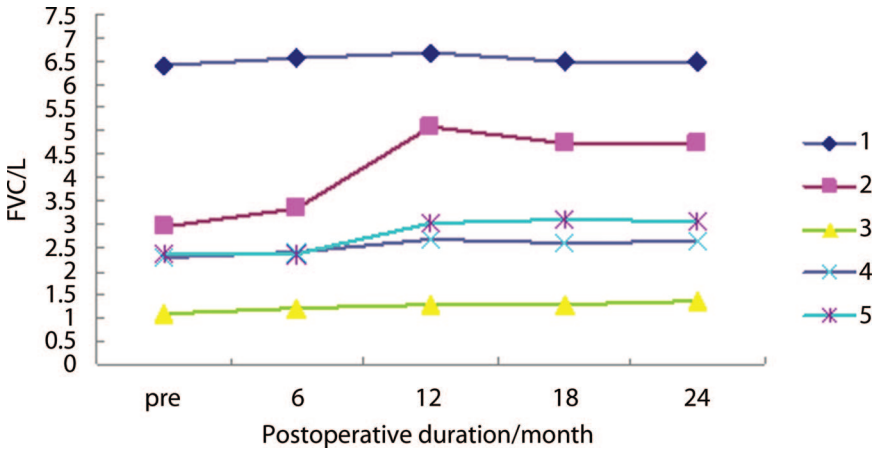

Fig. 2. Diagram shows comparison of the forced vital capacity (*FVC*) before and at 6, 12, 18, and 24 months after surgery in the five patients.