

# Preservation of Forehead Flap Pedicle in Nasal Reconstruction: A Technical Note

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## Dear Editor,

Given the ideal quality of color and texture, the forehead skin is recognized as the best donor site for resurfacing the nose (1, 2). The forehead is composed of skin, subcutaneous fat, frontalis muscle, and a thin layer of areolar tissue, which overlies the periosteum and bone. Traditionally, the flap is transferred in two stages, incorporating revisions at 6- to 12-month intervals (3).

In the first stage, varying amounts of frontalis muscle and subcutaneous tissue are excised distally, and the partially thinned flap is inset into the recipient site. In the second stage, after three weeks, the pedicle is divided and its proximal aspect is re-elevated off the recipient site and debulked (4). In all these types of flaps, which have axial feeding vascular bundles, preservation of the axial bundle is vital. We developed the present technique by focusing on the anatomical feature that the flap axial feeding bundle is located between the space superior to the periosteum and inferior to the skin.

### 1.1. Technique

Our proposed technique is based on changing the plane of release near the pedicle from suprapariosteal to subperiosteal (Figures 1 and 2). The first step is incision of the underlying face of the flap to the periosteum. Access to the periosteum is obtained in pursuit of the plane to release the pedicle; movement in the plane inferior to the periosteum provides a safe plane for dissection. This maneuver allows for the required release of the nourishing pedicle, without causing any concerns about the pedicle (Figure 3).

### 1.2. Discussion

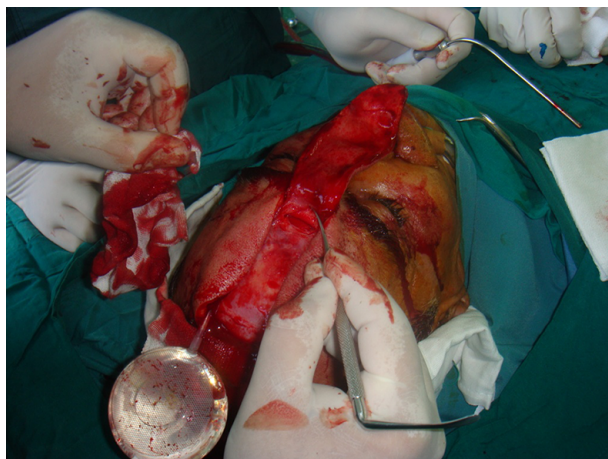
The forehead is multi-lamellar, consisting of skin, subcutaneous tissues, frontalis muscle, and a thin areolar layer (5). Elevated as a full-thickness flap, based on a paramedian pedicle, the supratrochlear vessels pass deeply



**Figure 1.** The First Step Including the Incision of the Underlying Face of the Flap to the Periosteum

over the periosteum at the supraorbital rim and travel vertically upward through the muscle to lie at an almost subdermal position under the skin at the hairline. The flap is myofascial, axial, and highly vascular. When it is transposed with all its layers, the incidence of flap necrosis is rare and soft tissues remain soft.

The most challenging part of the proposed procedure is rotating the flap. We have a limited amount of release in the classic technique. This limitation emanates from the pedicle-saving approach, inherent to any local axial flap. Release of the pedicle allows for a smaller flap and the possibility of inseting it more distally. This technique allows for the required release of the nourishing pedicle, without causing any concerns about the pedicle.



**Figure 2.** Access to the Periosteum and Pursuit of the Plane to Release the Pedicle



**Figure 3.** Movement in the plane inferior to the periosteum; this is a safe plane for dissection.

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