Prevention of Forehead Edema and Periorbital Ecchymosis after Hair Transplantation

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When informing patients about side effects associated with hair transplantation, we always must mention post-operative forehead edema and periorbital ecchymosis (“black eyes”). We know that nearly all hair transplant patients are at risk for developing forehead edema, and because edema may migrate from the scalp to the forehead to the orbits, a small number of patients—5%–10%—may develop periorbital ecchymosis. Generally, the earlier forehead edema develops, the more severe it eventually becomes.

While prevention of post-operative edema—for example, by pre- and/or post-operative administration of local or systemic corticosteroids—is always our goal, complete or significant prevention is often not realized. The goal then becomes decreasing the severity of the edema and/or ecchymosis.

Commonly used approaches to prevention or amelioration of forehead swelling include having the patient (1) apply cool packs several times daily to the forehead, (2) apply hand pressure to the forehead to massage fluid away from the forehead to the temple areas, (3) avoid the flat reclining position when sleeping for several days after surgery, and (4) apply an elastic band low on the forehead, above the orbits, to prevent fluid from reaching the orbits (by Dr. Damkerng Pathomvanich).

In my practice, I have found that use of a specially designed plastic forehead plate, an elastic headband, and locally administered corticosteroid will resolve nearly all instances of forehead edema and prevent periorbital ecchymosis in nearly all patients in whom post-operative forehead edema develops. The method has been successfully applied in 120 patients.

This technique utilizes (1) an elastic headband to fit just above the orbits, to keep fluid from reaching the orbits, and a plastic plate 13cm long by 4cm wide that is applied under the elastic headband, to direct fluid flow from the forehead to the lateral sides of the head (Figures 1 and 2), and (2) Triamcinolone 40mg (10mg/ml) mixed with 15ml tumescent solution, injected into the frontal recipient site.

The patient is instructed to apply the elastic headband and plastic plate if and when forehead swelling develops, or to apply the elastic band and plastic plate on the third post-operative day, whichever comes first.

The elastic band provides consistent pressure to prevent fluid migration to the periorbital area. The plastic plate slipped into place under the elastic band opens a channel for drainage of accumulated fluid from the forehead area to the lateral sides of the head toward the temples.

Application of the plastic plate has been effective even when the patient has forgotten to apply it before swelling reaches the periorbital area; when applied immediately in these circumstances, swelling has been seen to decrease in a matter of hours as fluid drains laterally from the forehead.