

Endoscopic Brow Lift for Visual Field Correction and Aesthetic Improvement in the Elderly Bald Male

Paul E. Chasan, MD; and Renato Saltz, MD

We have performed endoscopic brow lift in 25 men (63 to 77 years old). Sixteen had male pattern baldness, ranging from class IV to VII of the Norwood classification, and 14 had associated eyelid ptosis. Elderly male patients with male pattern baldness require special consideration in terms of brow fixation and placement of incisions. The techniques used are described and the results reviewed. The effects of these procedures on visual field deficits are discussed.

Technique

The patient's entire head is prepared. A Mayfield neurosurgical halo is used as a head-rest so the endoscopic instruments are not blocked. After instillation of a large volume of a dilute local anesthetic (approximately 400 to 500 ml), a midline incision and bilateral paramedian and temporal incisions are made. The midline incision is oriented vertically to minimize hair loss. The subperiosteal dissection is performed as previously described.^{1,2} If the patient has a drooping nasal tip, the dissection is continued onto the nasal root. When indicated, bilateral incisions are then made directly on the superficial layer of the deep temporal fascia using Metzenbaum scissors. The corrugator muscle is resected only if the patient has significant corrugator hypertrophy or glabellar creases. We use percutaneous screws through the paramedian incisions in combination with a 2-0 Prolene® suture through the temporal incision to fix the lateral brow. On occasion, we have used an external dressing as described by Ramirez with satisfactory results. Internal permanent microscrews and/or plates are not used. The eyebrow is fixed at a level that was marked preoperatively. In our study, this was always 2.5 cm from the midpupil on forward gaze to the superior border of the eyebrow. After screw fixation, upper eyelid surgery was performed as indicated.

Results

Twenty-five men 63 to 77 years old underwent endoscopic brow lift. Sixteen patients had pattern baldness class IV to VII according to the Norwood classification. Fourteen had associated eyelid ptosis. All patients underwent endoscopic brow lift to correct documented visual field defects. Postoperatively, all the patients had normal visual fields. One patient had scalp dimpling from a buried screw that required removal. Noninvasive

Paul E. Chasan is chief resident in plastic surgery at the University of Utah and Renato Saltz is an associate professor of plastic surgery at the University of Utah, Salt Lake City, Utah.

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Reprint requests: Renato Saltz, MD, University of Utah, #3C127, 50 N. Medical Drive, Salt Lake City, UT 84132.

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methods of fixation, such as external bandages or tissue glues, failed to maintain brow elevation. Two of these patients required eyebrow repositioning during the early postoperative period and refixation with internal screws.

Seven patients also underwent upper eyelid surgery. The endobrow dissection did not adversely affect this. Seven patients had ptosis related to the levator muscle. This was corrected during the same operation after the brow procedure. Patients requiring levator repair were operated on using monitored anesthesia care so that they could cooperate for the ptosis repair.

Discussion

Elderly male patients with severe brow ptosis often will have superior visual field deficits. This population can be divided into two nonexclusive groups: those with male pattern baldness and those with associated eyelid ptosis. These two features are given special consideration in the preoperative evaluation.

Because the frontal area is exposed in the balding patient, all incisions are visible. It is in this group of patients that endo-

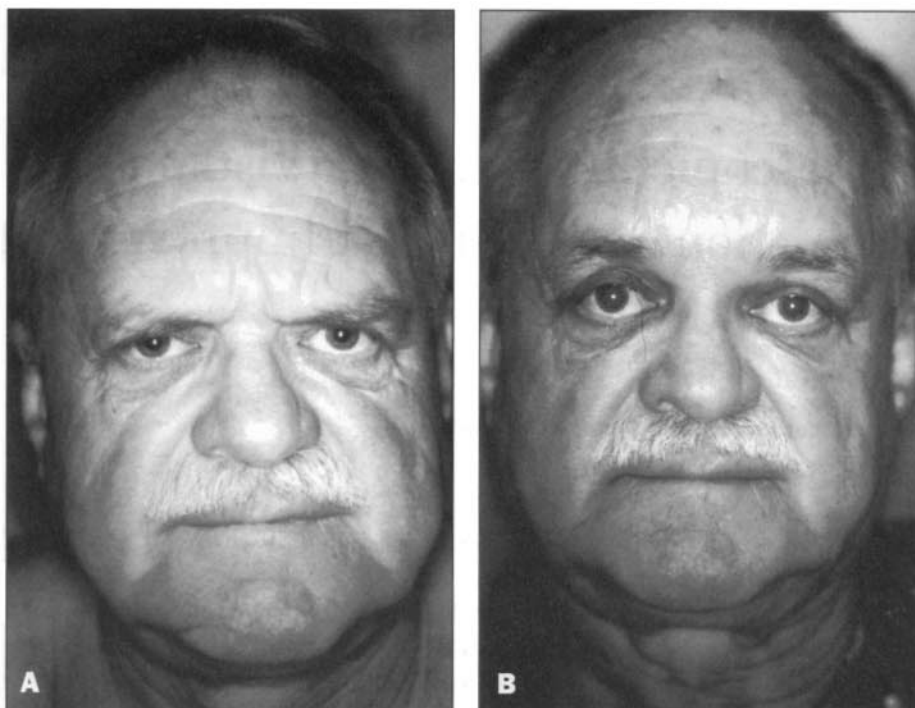


Figure 1. A, Preoperative view. B, 1-year postoperative view after endobrow lift.

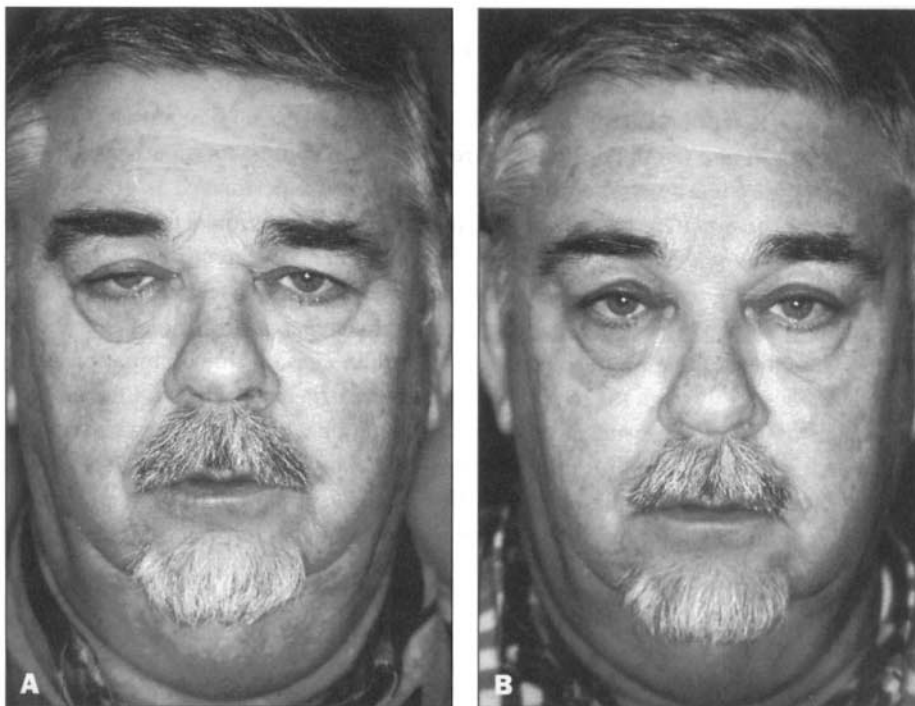


Figure 2. A, Preoperative view. B, 1-year postoperative view after endobrow lift and levator repair.

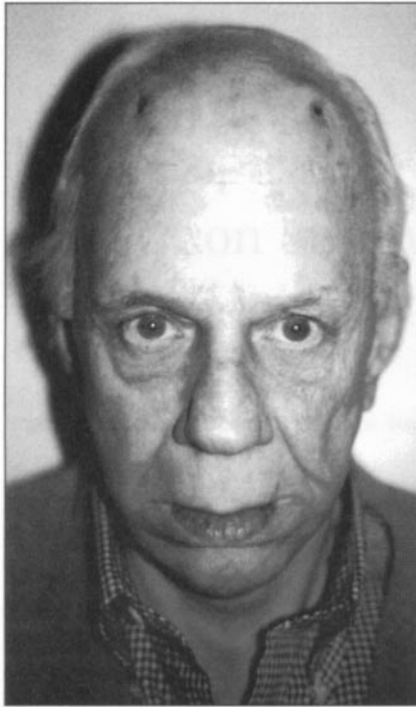


Figure 3. *Complications with buried screws. After removal, wounds healed without incident.*

scopic brow lifting demonstrates its greatest advantage (Figures 1 and 2). The three incisions used heal almost imperceptibly, especially the midline vertical incision. We found that the use of "permanent" or "buried" plates and screws resulted in an obvious dimpling, which is unacceptable in the balding patient (Figure 3). Using no

internal fixation has often worked well. In our younger patients, we obtained excellent results without resorting to screw fixation. However, in the elderly, we believe that without fixation, or using only tissue glues³ or external bandages,² no permanent elevation of the eyebrow occurred. We suspect that the loss of skin elasticity in elderly patients, especially those with sun damage, pre-

vents normal upward recoil after release of the periosteum along the supraorbital rim.

The roof of nose dissection resulted in a slightly elevated nasal tip intraoperatively and immediately postoperatively. However, the long-term results were inadequate in elderly men.

We found that in this series, the ideal brow position was 2.5 cm from midpupil to the superior aspect of the brow and this was maintained at 1 year follow-up.

Summary

Endoscopic brow lift is an effective treatment for superior visual field deficits resulting from brow ptosis in the older balding man. Simultaneous upper lid skin resection and levator repair are easily accomplished. Several modifications of previously described techniques are presented. The optimal distance from midpupil to the superior aspect of the brow was found to be 2.5 cm in our patients. These patients had not only functional improvement, but good aesthetic results as well. ■

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