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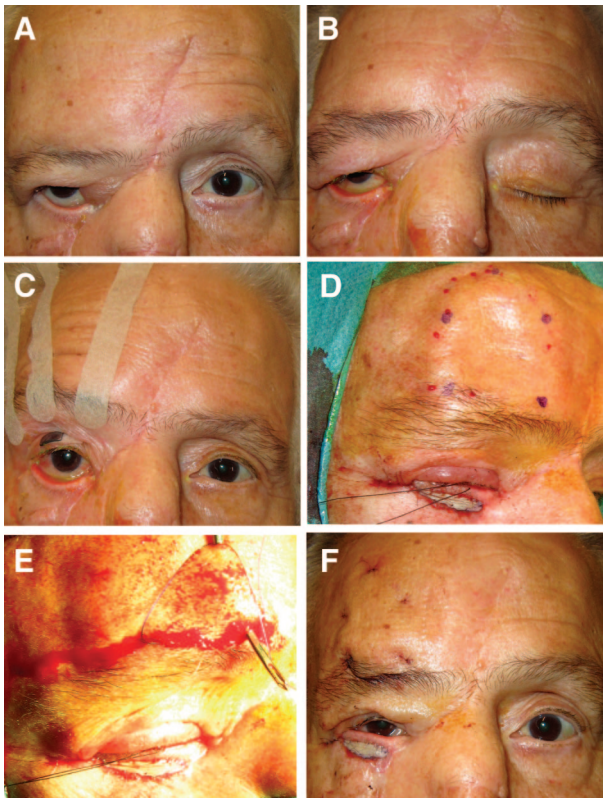
Single-Suture Brow Lift in VII Palsy

To the Editor:

VII nerve palsy is associated with a multitude of ocular and periocular disorders, including lagophthalmos, dry eye, paralytic ectropion of the lower eyelid, and brow ptosis.[1] The latter may be esthetically disfiguring due to induced asymmetry between the affected and unaffected side and the ipsilateral loss of forehead wrinkles.[1] In addition, brow ptosis may cause upper eyelid fullness and corneal erosions from elongated brow hair.[1] A number of procedures have been described for correcting brow ptosis associated with VII palsy, such as direct transblepharoplasty or midforehead or endoscopic brow lift.[2,3] Although effective, these procedures are time-consuming and may require sedation or general anesthesia and special instrumentation. In the case of direct brow lift, which is commonly employed for paralytic brow ptosis, damage to the supraorbital nerve, brow hair loss, and the creation of a disfiguring scar have been reported.[2] Furthermore, because patients with VII palsy may require additional corrective procedures, such as the insertion of a gold weight to correct lagophthalmos or the correction of paralytic ectropion (Fig. A–C), the duration of brow ptosis correction is important since it may constitute one part of a combined corrective procedure.

A previous study has described a minimally invasive brow suspension technique for facial paralysis, using 4.0 prolene sutures. In that study, a Hewson suture retriever was used to direct 3 sutures from a scalp incision to the suprabrow area.[4] The sutures were then anchored to exposed galea-pericranium of the scalp incision site.[4] In an attempt to further simplify and shorten the duration of brow lift in cases with VII palsy we have employed a single 2.0 prolene suture to lift the ptotic brow. A simulation for the effect of the procedure can be obtained preoperatively by using adhesive tapes, such as Steri-strips (3M, Maplewood, MN, U.S.A.) to elevate the ptotic brow (Fig. C). The procedure is easily performed on an outpatient basis under local anesthesia and usually lasts for only a few minutes. The frontal area above the ptotic brow is marked and infiltrated with local anesthetic (Fig. D). A Wright's fascia needle is used to pass the suture at a deep supraperiosteal plane (Fig. E). A variety of suture paths can be employed but our familiarity with the Fox pentagon path for the correction of blepharoptosis has lead us to commonly use a similar approach, i.e., a pentagon with a base along the superior brow border (with stab incisions located at the medial and lateral ends of the brow), and apex located close to the hairline, where the suture is secured with a deeply buried multiple knot. The intermediate passage points are placed at the midforehead area (Fig. D). The degree of suture tightening is decided intraoperatively based on the level of the fellow brow. All stab incisions are closed with 7.0 vicryl sutures (Fig. F). Although a variety of materials, well known from ptosis correction, such as polytetrafluoroethylene or silicone slings,[5] may theoretically be employed, we have used prolene because it is cheaper and it does not stretch. We feel that the thread brow lift described is better tolerated by patients than the direct brow lift, which is much more interventional and may be associated with frontal hypesthesia or a visible scar. Some degree of temporary skin puckering caused by suture tightening was observed only in the immediate postoperative intervals (Fig. F). For the surgeon, the thread brow lift is faster and much easier to perform, which may be important in cases where combined procedures are undertaken, with additional surgical steps such as paralytic ectropion correction or gold weight insertion. The main disadvantage of thread brow lift by the technique described may be the risk of brow ptosis recurrence due to cheese-wiring of the suspending material through tissues, although the risk may be less in cases with passages of slings though deeper planes, for thicker material (such as the 2.0 prolene suture) or for porous integrated materials, such as expanded polytetrafluoroethylene.[5] A comparative study of the minimally invasive single-suture brow lift described with the "gold-standard" direct brow lift in paralytic brow ptosis could help in determining its advantages and disadvantages in the everyday clinical practice.



A 75-year-old woman with right peripheral VII palsy associated with severe brow ptosis and lower eyelid ectropion, which in this case is mainly cicatricial due to previous reconstructive facial surgery **(A)**. Lagophthalmos is evident **(B)**. The effect of a thread brow lift is simulated by using Steri-strips **(C)**. The insertion of a gold weight at the superior eyelid is also planned **(C)**. The area above the ptotic brow is marked and infiltrated with anesthetic **(D)**. Passage of the suspending material (in this case 2.0 prolene suture) through stab skin incisions with Wright's fascia needle **(E)**. Appearance on the first postoperative day showing pronounced improvement in brow position **(F)**. The cicatricial lower eyelid ectropion was corrected by using a skin graft.

None of the authors have any conflicts of interest.

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AUTHOR QUERIES

AUTHOR PLEASE ANSWER ALL QUERIES **1**

A—Please check the following: "such as direct transblepharoplasty or midforehead or endoscopic brow lift."

B—Please note "Steri-strips" here rather than "steri-stips."

C—Please note location and wording of conflict of interest statement.