76 Mid-Lower Eyelid Tarsoconjunctival Flap–Skin Graft: Treatment of Cicatricial Lower Lid Retraction

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One challenging and potentially disfiguring postoperative complication associated with lower eyelid blepharoplasty is lower eyelid retraction, defined as a downward malposition of the lower eyelid margin. Severe postblepharoplasty lower eyelid retraction has been reported in up to 20 % of cases (McGraw and Adams 1991; Lisman et al. 1988; Baylis et al. 1999; Patipa 2000). In severe lower eyelid retraction, cicatricial attachments develop between the anterior lamella of the lower eyelid to the inferior orbital rim (Fig. 76.1).

Strategies in the surgical treatment of cicatricial lower lid retraction are challenging and commonly dissatisfying. Several surgical treatments, such as skin grafts, excision of cicatrix, midface lift, and tarsal strip, have been advocated to correct lower eyelid malposition in severe cicatricial lower lid retraction (Edelstein et al. 1998; Shorr and Fallor 1985; Jordan and Anderson 1989). For the oculoplastic surgeon confronted with the arduous task of proficiently managing the severe lower eyelid retraction in order to improve the functional and aesthetic qualities of the postblepharoplasty lower eyelid, the mid-lower eyelid tarsoconjunctival flap–skin graft is a powerful technique initially described by Putterman (1979).

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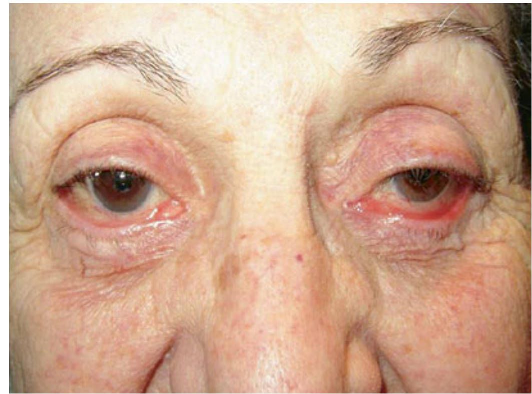

Fig. 76.1 Bilateral lower eyelid cicatricial retraction

Indications

Individuals presenting with the following signs of severe cicatricial lower lid retraction are appropriate candidates for this procedure: (1) retraction of lid associated with tethering of the lower lid to the orbital rim; (2) positive forced elevation test whereby the lower lid cannot be superiorly lifted; (3) binocularity, as the graft will obscure vision; (4) individuals who have not undergone previous tarsoconjunctival grafting of the ipsilateral upper lid; and (5) individuals who have undergone previous reconstructive surgeries (e.g., tarsal strip and midface lift).

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Complications

Lower lid laxity, manifesting as mild to moderate ectropion developing after the flap is severed, can be appropriately managed by massaging the lower eyelid upward. In my experience, no corrective procedures have been required to treat lower lid ectropion as long as the skin graft is appropriately sized and no laxity is evident prior to surgery. Upper lid retraction may develop in the construction of the tarsoconjunctival graft.

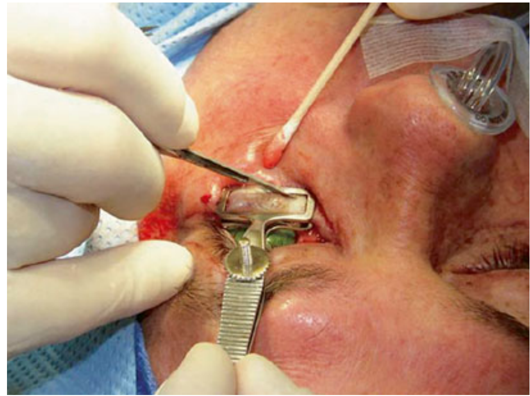

Fig. 76.2 Incision of anterior lamellae

Procedure

Stage 1

1. Inject the lower lid using lidocaine 2 % with 1: 100,000 units of epinephrine.
2. Create a subciliary mark 4 mm below the lower lid margin.
3. Place a 4-0 silk suture at the central aspect of the lid at the margin. This will serve as a useful traction suture.
4. Using a #15 Bard–Parker blade, create an incision along the lower lid at the previously demarcated line. This incision must not be in full thickness, but should incise to the suborbicularis space (Fig. 76.2).
5. Evert the lower lid using a Desmarres retractor and 4-0 silk suture.
6. Create an incision 4 mm below the lid margin at the conjunctival surface. The length of the incision must mirror the subciliary incision (Fig. 76.3).
7. Using a sharp scissor, make a buttonhole along the conjunctival incision full-thickness such that a union between the subciliary and conjunctival incisions is created.
8. Incise the remaining tissue to completely unify the conjunctival and subciliary incisions (Fig. 76.4).
9. Conservatively cauterize any bleeding vessels to reduce the chance of causing necrosis of the lid margin.

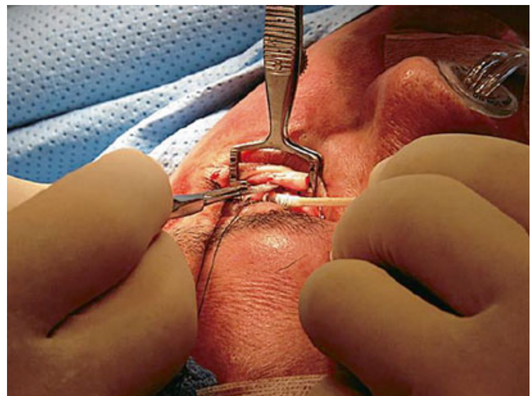

Fig. 76.3 Incision of conjunctiva 4 mm below lid margin

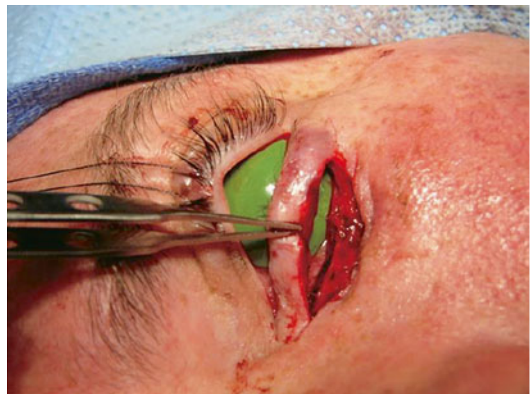

Fig. 76.4 Unification of cutaneous and conjunctival incisions

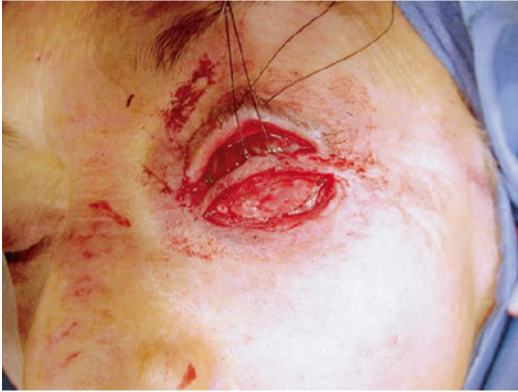

Fig. 76.5 Position the transconjunctival graft

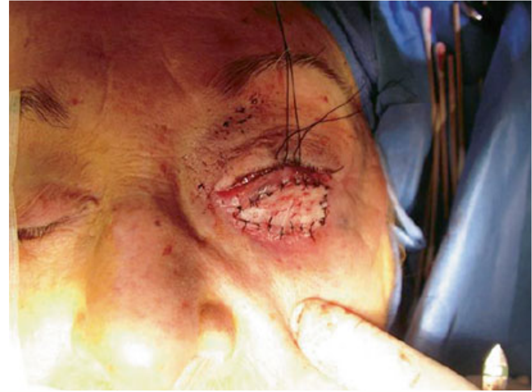

Fig. 76.7 Placement of full-thickness skin graft to anterior defect

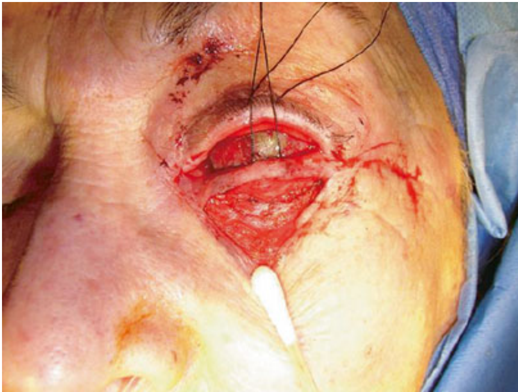

Fig. 76.6 Suture for a conjunctival graft to conjunctiva and inferior retractors

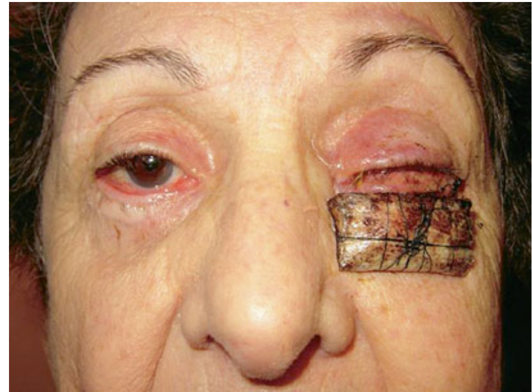

Fig. 76.8 Secure skin graft adhesion with recipient bed using Telfa bolster

10. Create the tarsoconjunctival flap in the normal standard fashion.
11. Place the lower lid margin to a position slightly above the inferior limbus of the cornea.
12. Measure the size of the defect and obtain a full-thickness skin graft (i.e., postauricular, eyelid skin, or supraclavicular).
13. Place the tarsoconjunctival graft below the lid margin and place the tarsal component next to the inferior edge of the conjunctival surface (Fig. 76.5).
14. Suture the inferior edge of the tarsoconjunctival graft to the conjunctiva and inferior retractors using interrupted 6-0 Vicryl sutures (Fig. 76.6).
15. Place the full-thickness skin graft over the anterior lamellar defect and suture the edges together using 6-0 Vicryl sutures (Fig. 76.7).
16. Place a Telfa bolster over the skin graft and lower lid, as previously described (Fig. 76.8) (Putterman 2002).

Stage 2

1. Sever the conjunctival flap at 5–6 weeks after the first stage of the procedure (Figs. 76.9 [preoperative] and 76.10 [postoperative]).
2. If any mild ectropion exists, instruct the patient to massage the lower lid upward multiple times.

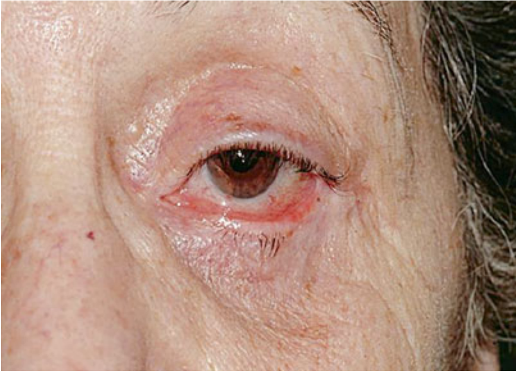

Fig. 76.9 Preoperative photo of left lower eyelid

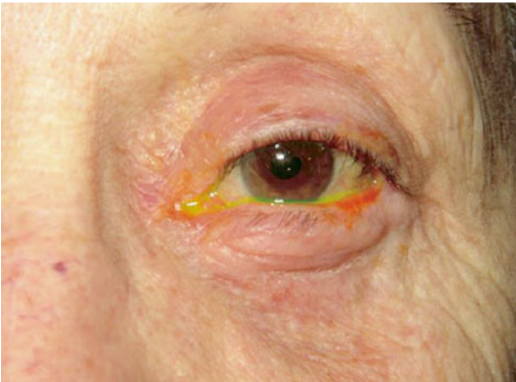

Fig. 76.10 Postoperative photo of left lower eyelid

Conclusions

The mid-lower eyelid tarsoconjunctival flap–skin graft is a powerful technique in the surgical armamentarium for severe cicatricial lower eyelid retraction (Pak and Putterman 2006). The procedure can result in excellent esthetic and functional outcomes, particularly in those situations where previous reconstructive efforts have failed.

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