Correction of Cicatricial Upper Eyelid Ectropion Using a Dermofat Graft and an Anti-Adhesive Agent

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INTRODUCTION
Cicatricial ectropion occurs when any factor shortens the anterior lamella of the lid. Such factors include congenital malformations, trauma, burns, allergies, medications, and inappropriate eyelid surgery [1]. Eventually, ectropion can lead to chronic conjunctivitis, keratitis, corneal ulceration, and lagophthalmos, with symptoms of tearing, photophobia, pain, and foreign body sensation [2]. The treatment of eyelid ectropion is challenging due to the anatomical complexity of the area and often requires surgical interventions including skin grafts and local flaps. Although these modalities can result in correction, recurrence can occur, necessitating more extensive and aggressive surgery. We present a case of the successful correction of cicatricial upper eyelid ectropion using a dermofat graft and an anti-adhesive agent (Guardix-Sol) after the wide release of tethering scar tissue.

CASE REPORT
A 60-year-old Asian male patient presented with poor eye closure and ipsilateral forehead pain when eye closure was forced. He had suffered a deep muscle layer laceration at the left upper eyelid in a traffic accident 1 month prior and had undergone primary closure at the local emergency department. Due to the retraction caused by the scar tissue, his left eyeball was exposed by about 4 mm when both eyes were closed (Fig. 1). The patient suffered from subsequent ocular redness and irritation due to poor lid-globe apposition. To correct the severe cicatricial upper eyelid ectropion, we performed scar release with a dermofat graft under local anesthesia. First, an incision was made at the supratarsal crease, and the scar tissue throughout the orbicularis oculi muscle and levator aponeurosis and tarsal plate was completely dissected and released from the upper lid to the ipsilateral suprabrow area. A skin graft was unnecessary since our patient had sufficient upper eyelid skin. To prevent the recurrence of lid retraction, a 2 × 5-cm area of dermofat was harvested from the patient's right axilla. The dermofat was de-epithelialized and trimmed to an appropriate thickness according to the fat pad volume of the opposite upper lid for a symmetric appearance. We inserted the dermofat into the plane between the orbicularis oculi muscle and levator aponeurosis with its dermal layer facing down. The dermofat was fixed with pull-out sutures at 3 points (Fig. 2). After applying Guardix-Sol, an anti-adhesive agent, beneath the dermofat, a silastic drain was inserted into the same layer.
and a continuous skin suture was made with 6-0 nylon. Minimal dressing was performed to induce blinking as an early exercise. The pull-out and skin sutures were removed 5 days postoperatively without any specific complications. At a 3-month follow-up visit, lid retraction had not recurred, and symmetric appearance was well maintained both when the eyes were closed and opened (Fig. 3).

**DISCUSSION**

Upper lid retraction is defined as a margin reflex distance 1 (MRD₁) (the linear distance between the pupil center and the edge of the upper lid margin) greater than 5 mm. It can be more precisely classified according to severity: mild (MRD₁ ≤ 5 mm), moderate (MRD₁,

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**Fig. 1.** Preoperative photography. [A] Frontal view with both eyes open. [B] Poor eye closure due to severe retraction of the left upper eyelid.

**Fig. 2.** Intraoperative photography. [A] Dermofat grafting [black star] after the complete dissection of scar tissue. [B] Insetting of dermofat at the sub-orbicularis oculi muscle layer.

**Fig. 3.** A 3-month postoperative photograph. [A] Frontal view with both eyes open. [B] Satisfactory eye closure and symmetric appearance.
Patient provided written consent for the use of his images.

REFERENCES