A CASE OF SEVERE CHEMICAL EYELIDS BURN (P079)

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Introduction: Chemical burns are caused by exposure to acids, alkalis or other corrosive substances and can lead to disfiguring scar formations and functional complications.¹ The degree of injury depends on the type and concentration of the chemical, as well as the volume and the duration of the exposure.² The surgery of large, full-thickness chemical injury of eyelids requires a comprehensive approach with an emphasis on preserving both function and aesthetic appearance.³,⁴ Our report describes a case of deep periorbital acid burns and consequent eyelid reconstruction.

Material and Methods: A 61 year old tractor driver was admitted to our burn centre 10 hours after a driving accident and chemical burn caused by battery fluid leak (35% Sulfuric acid + 65% distilled water) in the area of his left eye. The patient was diagnosed with 3rd degree burn of the upper and lower lids of the left eye. Debridement was performed approximately 48 hours after injury. The size of the entire defect measured 6.5 × 4.5 cm to 6.5 x 1.5 cm and involved the lower tarsal plate, orbicularis muscle, zygomatic bone. The one step surgery included: an ear cartilage graft was used for the missing tarsal plate; a pedicled superficial temporal fascial flap (closed with FTSG) was designed for the reconstruction of the lower lid. The small lateral defect of the upper eyelid was covered with a full thickness skin graft. (Fig.1) The partial loss of FTSG resulted in retraction of the lower eyelid which was corrected after one month with a pedicled supra-eyebrow skin flap. (Fig.2)

Results: There were no incidence of severe complications, such as exposure keratitis, corneal ulcer or vision loss. Revision surgery was performed to treat a lower lid retraction. During the 8th month follow-up period, no complication was encountered and patient healed uneventfully achieves favorable functional and cosmetic results. The patient was satisfied and refused additional surgery.

Conclusion: Severe eyelid chemical burns should receive early repair and reconstruction in order to protect the eyesight and alleviate the inflammatory reactions. Temporal fascial flap and a cartilage ear graft offer a safe and reliable reconstruction in cases of full-thickness damage of eyelids, zygomatic bone and tarsal plate. Secondary correction surgery is required more often than not if the injury involves all eyelid structures.

References:

**Fig. 1.**


**Fig. 2.**

A. Outlines of the supra-eyebrow skin flap. B. Excision of retracted tissue. C. The skin flap is placed on the defect. D. Early result - 2nd day. E and F. Late result - 8th month.