

# Not all is lost: journey of a deep periorbital burn

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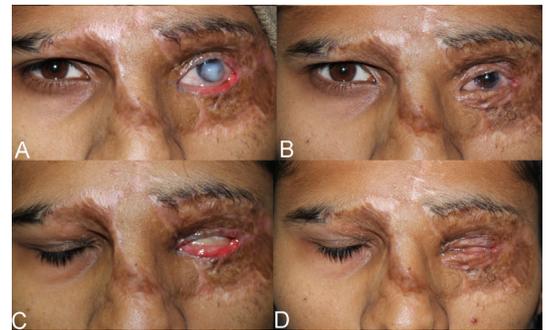
## DESCRIPTION

A 16-year-old male presented with deep dermal burns of upper and lower eyelids and decreased vision in left eye after falling on a hot silencer of a motorcycle 2 weeks before. His best-corrected visual acuity was 6/6 and light perception in right and left eye, respectively. Skin over the left side of the nose, root of the nose and right medial brow area was necrotic extending up to submusculoaponeurotic layer (**figure 1A**). There was localised corneal perforation inferiorly with iris prolapse and shallow anterior chamber in left eye. Urgent debridement was performed under general anaesthesia. Necrosis was involving tarsal plates in both the eyelids. Corneal perforation was sealed with cyanoacrylate glue along with permanent tarsorrhaphy to prevent exposure keratopathy. Three weeks later, eyelid was reconstructed with split thickness skin graft harvested from right anterolateral thigh along with paramedian forehead musculocutaneous flap (**figure 1B**). Corneal melt was still worsening due to loss of orbicularis function, which required blepharorrhaphy. Corneal melt healed with adherent leucoma and quiet ocular surface could be attained after 2 months from injury (**figure 2A**). Residual lagophthalmos was fixed with retroauricular full thickness skin grafting in upper and lower eyelids (**figure 2B**). Successful visual rehabilitation (6/18 in left eye) could be accomplished by full thickness keratoplasty combined with cataract extraction and intraocular lens replacement at 8 months from injury (**figure 2C,D**).

Primary aim in periorbital burn with ocular involvement lies in salvaging eye followed by vision.<sup>1 2</sup> Burn scar management in late stages requires eyelid reconstruction with free flaps or skin grafting to restore functional anatomy.<sup>3</sup> Adequate corneal coverage in acute phase should be aimed in



**Figure 1** (A) At presentation, deep dermal burn involving upper and lower eyelid, left side of nose and contralateral medial brow. (B) Status after periocular reconstruction with split thickness skin grafting and paramedian forehead flap.



**Figure 2** (A) Corneal scarring with exposure keratopathy after blepharorrhaphy release. (B) Residual lagophthalmos repaired with skin grafting followed by penetrating keratoplasty in left eye. (C, D) Lagophthalmos before and after postauricular skin grafting.

order to prevent worsening of exposure keratopathy. This case highlights the importance of an early intervention and management outcome as a result of multidisciplinary approach.

## Learning points

- ▶ Adequate corneal protection in acute setting of thermal burn might require complete blepharorrhaphy.
- ▶ Vision salvage can be achieved in cases with extensive periorbital burns under multidisciplinary care.

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**Competing interests** None declared.

**Patient consent** Obtained.

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