



Ocular Injuries Associated With Facial Burns

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Background

- Patients who sustain facial burns are at risk of ocular injury
- Facial burns may directly injure the globe, or may cause indirect damage through secondary ocular exposure
- Secondary exposure may result from a blunted Bell's and blink response secondary to sedation, periorbital oedema, or from eyelid retraction and contractures

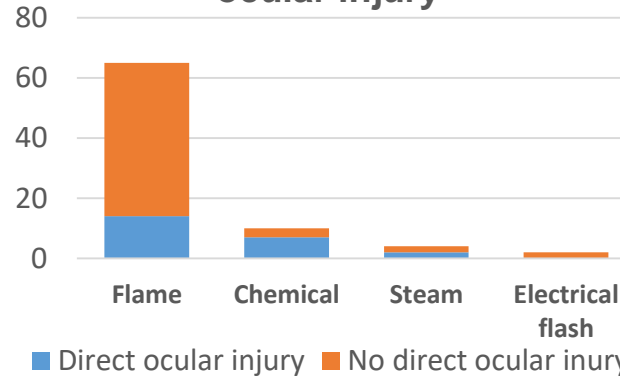
Aims

- Analyse the incidence, mechanism and sequelae of ocular injuries occurring amongst patients who were managed for facial burns at Royal North Shore Hospital between January 2013 and January 2017

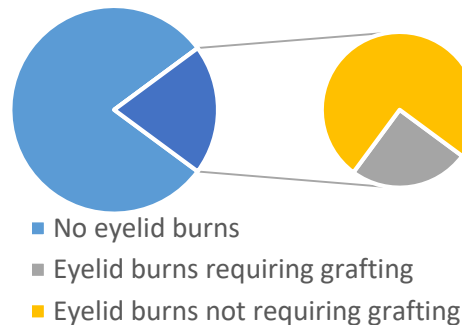
Results

- 279 patients sustained facial burns
- 28% (79/279) were referred to ophthalmology to exclude ocular injury
- 29% (23/79) of referrals were found to have an immediate globe injury

Burn mechanism and direct ocular injury



Eyelid burn and graft frequency



- Injuries: Flame – 100% (14/14) corneal epithelial defects; Chemical – 29% (2/7) Grade I, 29% (2/7) Grade III, 43% (3/7) Grade IV chemical burns; Steam – 100% (2/2) epithelial defect
- Acute complications – 53% (12/23) reduction in visual acuity, 13% (3/13) lagophthalmos, 4% (1/23) ectropion
- Late complications – 9% (2/23) corneal scarring with persistent discomfort and mild visual impairment; 4% (1/23) exposure keratopathy; 13% (3/23) cicatreal retraction
- 2 Grade IV chemical burns were transferred to another facility; follow up data not available
- 31% (5/16) of patients with eyelid burns sustained immediate ocular injuries, 60% (3/5) of which were caused by chemicals and 40% (2/5) by flames
- 25% (4/16) required grafting for eyelid burns

Conclusion

- Clinicians carry a high index of suspicion for ocular injuries as a result of facial burns. Despite this, few facial burns result in immediate injuries with significant ongoing morbidity.