ORBITAL COMPARTMENT SYNDROME SECONDARY TO SUPERFICIAL OCULAR AND EYELID CHEMICAL FACIAL BURN
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Purpose: To present a unique case of orbital compartment syndrome in the setting of superficial alkali burn to the face without aggressive fluid resuscitation
Study Design: Case report and review of literature
Methods: We describe the case of a 13-year old boy who sustained alkali burns to the face and ocular surfaces from an explosion of a homemade explosive device. The patient was admitted to pediatric ICU for mild respiratory distress but was otherwise systemically well and did not need fluid resuscitation. There were complete bilateral corneal epithelial defects with 360 limbal ischemia. He developed markedly elevated IOP and was treated with maximal glaucoma therapy. He developed disc edema, arterial pulsations and tight orbits with complete gaze restriction bilaterally. Urgent canthotomy and cantholysis were performed bilaterally.
Results: The patient’s pressures normalized, gaze restriction and orbital congestion resolved. Bilateral amniotic membrane grafting was performed in the subacute setting to prevent symblepharon formation and to assist ocular surface healing. His facial soft tissue injuries were mostly 1st degree burns with small areas of 2nd degree involvement and continued to heal well.
Conclusions: The patient’s elevated intraocular pressure can be explained by several mechanisms. However, the documented presence of complete gaze restriction and clinically tight orbits suggest an orbital component. Orbital compartment syndrome in the setting of aggressive fluid resuscitation for burns is a documented phenomenon. We believe this is the first reported case of orbital involvement in a burn patient with relatively mild and localized facial burn and without systemic fluid resuscitation.