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Ophthalmology

SUCCESSFUL MANAGEMENT OF TRAUMATIC LID LACERATION AT A PERIPHERAL HOSPITAL: A CASE REPORT

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ABSTRACT Eyelid lacerations form a major bulk of the ocular trauma that is seen in accident and emergency department. In eyelid injuries we follow certain rules of reconstruction, but each case is unique and requires some inventiveness. A 47 years old male sustained injury to face and eyes when he his car collided with another car and he hit against the dashboard. Post injury, he sustained multiple abrasions and lacerations on the face forehead, right eyelid and right cheek. Patient was administered injectable antibiotics, painkiller, and tetanus toxoid injection. Thorough ocular and systemic examination was done. The laceration over the right side of forehead and eyebrow was repaired followed by suturing of upper eyelid in layers. Suture removal was done after 10 days. Patient was kept on oral antibiotic and eye drops. Proper reconstruction and strict postoperative care ensured a good recovery with acceptable aesthetic appearance.

KEYWORDS : Ocular trauma, Eyelid lacerations, Primary repair

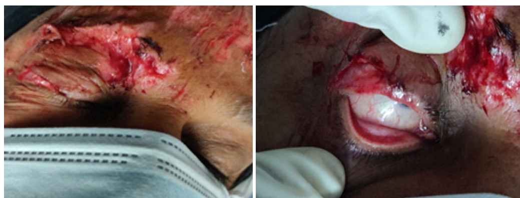
INTRODUCTION

Eyelid injury is a rather common medical condition in ophthalmology, requiring well-planned and complex treatment to provide the best outcome and reduce the chances of post-operative complications. The most common causes of eyelid injury are sports injuries, traffic accidents, dog bites, and injuries related to violence.[1,2] Lower eyelids are frequently involved. [3] These are managed differently depending on the depth, width and location of the injury. Repairing of these require good anatomic knowledge and meticulous approach. Here, we discuss the successful management of a case with multiple facial and eyelid lacerations at a peripheral eye centre.

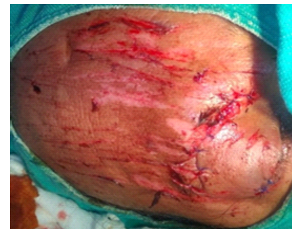
CASE REPORT

A 47 years old male sustained injury to face and eyes when he his car collided with another car and he hit against the dashboard. Post injury, he sustained multiple abrasions and lacerations on the face, forehead, right supraciliary area, right eyelid and right cheek. The face was inspected for any associated injury, features of head injury were ruled out, the sites of injury were cleaned and copious irrigation of the eye was done. The wound was carefully inspected to identify tarsus and lid margin landmarks such as grey line, anterior lash line, and posterior margin. Complete eye and physical examination was done to look for presence of Foreign bodies, Tissue loss in eyelash, eyebrow and Lid margin.On clinical examination, the eye globe and the eye muscles were intact, the visual acuity was appropriate and X-ray imaging did not show associated skeleton damage. Detailed and meticulous slit lamp evaluation was done to look for microscopic hyphaema, angle recession. Fundus evaluation was done to rule out any vitreous haemorrhage, Retinal detachment. He received local and systemic antibiotic therapy and tetanus prophylaxis. The laceration over the right supraciliary region and eyebrow was repaired with 4-0 proline. The upper lid laceration was sutured with 6-0 proline after suturing the tarsal plate with 5-0 vicryl. Gentle tissue handling and proper alignment was done to achieve the best possible functional and cosmetic outcome. Post suturing and repair the patient was kept on injectables for 48 hrs and thereafter on oral antibiotics with daily application of antibiotic ointment. Suture removal was done after 10 days .Complete healing of the wound was noticed by the end of 7th, 14th, 28th day and 3 months. No post-operative complications like ectropion or entropion, step formation in the margin of eyelids and wound dehiscence were noticed in a follow up period of six months.

Pre-operative pictures of the patient's eyelid on the day of admission.



Intra-operative



Pictures of the patient 7 days after the procedure (a) 14days after the procedure (b) 28 days after the procedure (c) and 03 months after the procedure (d).

DISCUSSION

Eyelids are protective curtains in front of the eyes which give shape and beauty to the face. The presence of lid laceration, however insignificant, mandates careful exploration of the wound and examination of the globe and adnexal structures. Repair of any lid defect should be repaired by direct closure whenever possible, even under tension as this affords the best functional and cosmetic results.[4] Always bear in mind that "Primary repair is the best repair." There are certain principles to be followed during lid repair surgeries. Copious irrigation and exploration of wounds with the removal of any foreign body. Reconstruction should be done in layers as per correct anatomical orientation. The wounds should not be extended to explore structures except in cases of suspected foreign body. If the orbital septum if damaged it should never be repaired, as this may result in compromised eyelid excursion and even lagophthalmos. We should

avoid suture incorporation of the septum during repair. The presence of orbital fat raises the risk of deeper injury and foreign bodies In brow lacerations, eyebrows should never be shaved off as orientation of the brow hair will help us in correct approximation Anterior lamellar defects not involving lid margin should be repaired by primary closure. If required, undermining of the surrounding skin was done to mobilize skin for adequate closure. Interrupted sutures with 6-0 vicryl may allow for hematoma egress or infection drainage. The deep tissues should be repaired first. Conjunctival lacerations of 5 mm or less often do not need to be repaired except in the case of symblepharon. Primary repair of the levator aponeurosis is done by repositioning it to the upper half of the tarsus with permanent 6-0 or 7-0 suture material. During surgical repair of lid lacerations, ensure that no knots or suture material can damage the cornea. Full-thickness lid margin lacerations, canalicular tears, canthal injuries, and lacerations with tissue loss are entities which should be meticulously tackled using specialized techniques.[5,6] Canalicular injury should be suspected in all lacerations which are medial to the punctum. Complete loss of the lacrimal canaliculus with epiphora is a condition whose reconstruction often results in a poor outcome.[7] We try to save all eyelid tissues, as high vascularity often allows for viable re-approximation of partially avulsed ocular adnexal tissue. A broad-spectrum prophylactic antibiotic cover is preferred (such as amoxicillin-clavulanate or clindamycin for the penicillin-allergic). Tetanus prophylaxis may also be required. Lacerated wound of eyelid is a condition which should not be neglected as it may lead to other ocular disorders like Kerato-conjunctivitis, corneal ulcers etc. which may interfere with the vision of animal. A three layered suturing technique using an absorbable suture material is recommended to be carried out under regional analgesia in order to get encouraging results. Proper reconstruction and strict postoperative care ensured a good recovery in acceptable aesthetic appearance. Follow-up is directed at complications like Lid margin notching, Lagophthalmos, Hypertrophic scars, Infections, Tearing and Traumatic ptosis which may require revision surgery. The visual prognosis for lid lacerations is usually excellent unless there is accompanying globe rupture.

CONCLUSION

Traumatic laceration to the eyelid requires a thoughtful, well-planned approach in order to provide the best outcome and reduce the chances of postoperative complications

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Statement of Human and Animal Rights

This article does not contain any experimental studies with human or animal subjects.

Statement of Informed Consent

Informed consent was obtained from the individual participant included in the study.

Dr. Rishi Sharma was the primary author and surgeon involved in the management of the patient and manuscript preparation as well as editing. Dr. BV Rao was involved in manuscript preparation and editing.

REFERENCES

1. Bowling B. 8th ed. Philadelphia: Elsevier; 2016. Kanski's Clinical Ophthalmology: A Systematic Approach.
2. Lo Torto F, Losco L, Bernardini N, Greco M, Scuderi G, Ribuffo D. Surgical Treatment with Locoregional Flaps for the Eyelid: A Review. BioMed Res Int. 2017;2017:6742537.
3. Subramanian N. Reconstructions of eyelid defects .Indian J Plast Surg. 2011 Jan;44(1):5–13.
4. Tomy RM. Management of eyelid lacerations. Kerela J Ophthalmol 2018;30:222-7)
5. Collin JR. A Manual of Systematic Eyelid Surgery. 3rd ed. United Kingdom: Elsevier Limited; 2006
6. Hawlina and Vergot: Management of Traumatic Lower-Eyelid Avulsion and Complete Loss of the Lacrimal Canaliculus: A Case Report, Case Rep Ophthalmol 2019;10:172–179
7. Czyz CN, Cahill KV, Foster JA, Michels KS, Clark CM, Rich NE. Reconstructive options for the medial canthus and eyelids following tumor excision. Saudi J Ophthalmol. 2011 Jan;25((1)):67–74.