

# Trauma-related Upper Eyelid Avulsion with Canalicular Laceration and Levator Muscle Laceration

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## Introduction

Traumatic lid avulsion of the medial canthal tendon often leads to injuries of the eyelid adnexa such as canalicular laceration which if not repaired appropriately will lead to epiphora. The delicate levator complex can be injured as well necessitating repair or else the patient risks post operative blepharoptosis. Physicians must be aware of these structures and be prepared to repair them if necessary. This report presents a complex case of upper eyelid avulsion with canalicular and levator muscle involvement following an all-terrain vehicle (ATV) accident.



**Figure:** Clinical photographs; Pre-operative (left), Immediate post-surgical repair (centre), 2 weeks post-op (right).

## Report

A 43-year-old female presented to the ED in a clinically intoxicated state. Visual acuity with pinhole was 20/30 OD and 20/70 OS. Pupils were round and reactive with no relative afferent pupillary defect. Intraocular pressure was 24 OD/19 OS. Extraocular motility was full OD and restricted OS. Confrontation fields were full OU. Adnexal exam revealed an upper eyelid avulsion with clearly visible orbital fat, involvement of the medial portion of the levator aponeurosis, canalicular involvement of the upper lid canaliculus and an extensive periorbital and frontal scalp soft tissue laceration (4cm laceration extending above brow) with paralytic brow ptosis. In a stepwise fashion, the canaliculus was repaired with bicanalicular Crawford tubes. Next, the medial canthal tendon and margin laceration was then repaired with polygalactin 910 sutures, realigning the normal anatomy of the lid margin. The aponeurosis laceration was next carried out with polygalactin 910 sutures. The brow laceration was then closed with deep polygalactin 910 sutures and gut suture for the skin. The remaining eyelid skin laceration resulted in a complex stellate injury that was closed with gut suture. A temporary tarsorrhaphy was performed as a final step to aid in swelling.

## Conclusion

Eyelid lacerations of the medial eyelid must be evaluated for canalicular injury, and the presence of fat in the wound necessitates taking the patient to the OR given the associated risk of levator injury, as in our patient. Repair of these injured structures is critical for a successful outcome in the traumatic eyelid..