Transconjunctival Lower Lid Approach for Orbital Fractures with Lateral Peri-canthal Incision

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Disclosure

• No financial disclosures.
Objective of the study

• The transconjunctival approach with lateral canthotomy is popular approach in orbital fractures because of minimal external scar.

• if the lateral canthotomy area is improperly repaired, it may cause lower lid malposition and deformity.
The authors report the use of a modified transconjunctival incision method to overcome possibility of improper repair in cantholysis.
Material and Method

• Between January 2011 and December 2012, this technique was used in 30 patients with orbital fractures.

• We performed lateral cantholysis by lateral peri-canthal incision.
Operation method

- The incision is designed a line is drawn perpendicularly to the gray line, past the eyelashes approximately 3 mm away from gray line.
- The design is extended obliquely in the inferolateral direction, along minor skin crease, for 5 - 8 mm.

Supported by the handle of empty scalpel holder
The incision is made through the skin and full thickness of the eyelid, including the tarsal plate.

The additional transconjunctival incision is extended medially towards the punctum along the inferior margin of the tarsal plate.
• The lower lid can readily be distracted, or "swung", away from the globe without the need for excessive tension.

The inferior orbital rim and floor are accessed by dissecting through the usual submuscular plane.
• With satisfactory repair of orbital fracture(s), the incision is closed by the meticulous apposition of the divided structures.
Most notably, the tarsal plate and gray line are used as focal loci of approximation to restore the anatomy of the lower eyelid.
• The tarsal plate is repaired with an inverted 6-0 vicryl suture with the knot buried. The conjunctiva is closed with 7-0 vicryl, and skin with 6-0 silk
Result

• One re-operation was required in a case of preseptal hematoma.
• One patient presented with notch deformity but did not feel the need for a revisional operation.
• 29 patients were satisfied with the aesthetic and functional outcome.
Case

Blow out fracture of right orbit floor in 46 yr old man

Preoperative Photo (Initial visit)  Postoperative Photo (1yr follow-up)
Conclusions

• In the modified transconjunctival incision with lateral peri-canthal incision, provides excellent exposure of the orbital floor.

• The aesthetic and functional outcomes of the eyelid aperture were excellent.
Significance of the findings

• The decoupling of lower eyelid through the lateral portion of tarsal plate provides a reliable and consistent landmark by which the anatomy of eyelid could again be restored in the transconjunctival approach for orbital fractures