

LCC Training System Users Guide

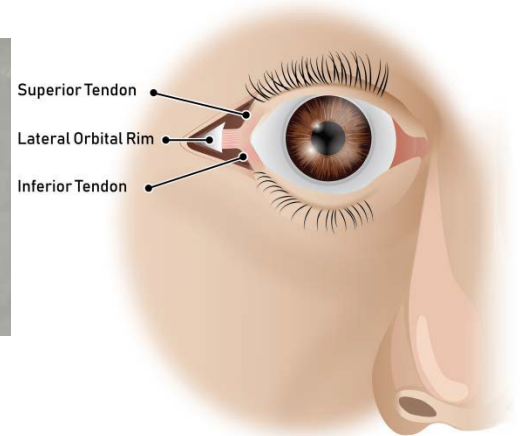
Introduction

Non-penetrating ocular trauma is mostly due to blunt trauma to the face. These injuries can result in a compartment syndrome of the orbit, easily decompressed through the use of a simple procedure, performed emergently, a Lateral Canthotomy and Cantholysis (LCC). The LCC is an eyesight-saving procedure that can be performed very quickly and with few instruments. It allows for a release of pressure on the optic nerve caused by retrobulbar hemorrhage and can be performed in the field, or at the bedside, with few instruments that are readily available to medics or other emergency medical personnel.

LCC Procedure

Instruments:

- Iris or Suture Scissors
- Syringe with 25 gauge 5/8 needle
- Adson Forceps
- Hemostat or needle driver



Getting Started: Identify the eye needing the procedure using digital pressure to confirm resistance to retropulsion. Be sure to **MATCH COLOR AND SHAPE** of the eye inserts to the receptacles in the head. The curved portion of the eye insert should be on the nasal side. Press firmly to click into place.

The LCC consists of **5 main steps**

Step 1: Inject the lateral canthal area with anesthetic

- Using an empty syringe, insert the needle into the lateral canthus pointing away from the eye and to the depth of the lateral orbital rim.



Step 2: Crush lateral canthal tissue using hemostat

- Insert the hemostat into the lateral canthus and up to the depth of the lateral orbital rim.
- Close the hemostat and hold closed for 1 minute.



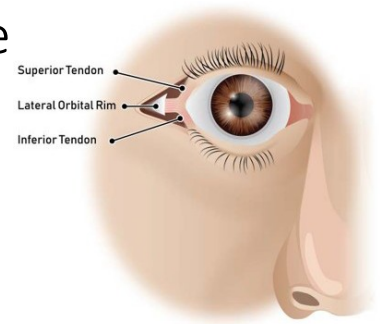
Step 3: Cut through the skin and muscle to create a lateral canthotomy

- Using scissors, make a FULL THICKNESS incision along the lateral canthus up to the lateral orbital rim.



TURN OVER FOR STEPS 4 and 5

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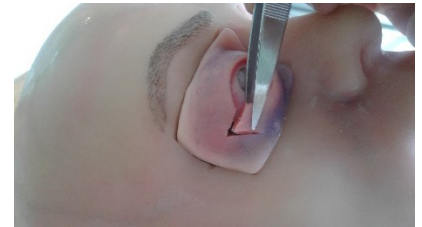


Step 4: Identify the inferior lateral canthal tendon and cut it to release the eyelid (cantholysis)

Critical Step

Preferred Method

- Using forceps, pull up on the lower lid and with the scissors in the other hand, strum the lower lateral canthal tendon to identify it.
- Insert the scissors into the previously created canthotomy and point the tips towards the corner of the mouth on the same side.
- Be sure to go deep enough to rest the “V” of the scissors on the orbital rim. If you cannot, then you need to make your canthotomy longer.
- Make a FULL THICKNESS cut across the lower lid, taking care to include the skin and conjunctiva.
- The eyelid should move freely away from the orbital rim—if it does not, cut any residual attachments.



Alternative Method

- Using forceps, pull up on the lower lid and with the scissors in the other hand, strum the lower lateral canthal tendon.
- Be sure to aim the scissors towards the angle of the jaw on the same side.
- Once the tendon has been identified, cut it completely.
- The lower lid should feel looser.



Step 5: Check the orbit for decompression

Critical Step

- Using two fingers, press on the eye to assess whether the pressure behind the eye has decreased.
- **If the inferior tendon has been successfully cut, but there is still a build-up of pressure in the orbit, the alternative method of step 4 (NOT the full-thickness cut) should be repeated on the superior lateral canthal tendon and then followed by Step 5. ****



The LCC Training System – Use and Maintenance

Eye Inserts – MATCH COLOR AND SHAPE of the eye inserts to the receptacles in the head. The curved portion of the eye insert should be on the nasal side. Press firmly to click into place. Label specifies single or double tendon models. Eye insert types include Normal, Control and Proptotic, Single and Double Tendon models. Students should not cut the Control.

Send used eye inserts to: Margaret Bailey, Sonalysts, Inc. 215 Parkway North Waterford, CT 06385.

Care: Clean with rubbing alcohol when needed. If a repair is needed, Silpoxy works sufficiently for small repairs on silicon. Call 860-326-3621 for assistance.