

# FOCAL POINTS

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## Management of Eyelid Trauma

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# Management of Eyelid Trauma

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**Cover: Figure 7.** Resection of skin, orbicularis, and the lower crus of the canthal tendon exposes the canalicular system. The canaliculi lie in the plane of the caruncle; however, as they approach the lacrimal sac, they are slightly anterior to this plane.

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## Learning Objectives

The study of this *Focal Points* module will help the reader to:

- Assess types of eyelid lacerations for appropriate treatment
- Identify significant periorbital anatomical disruptions and their role in eyelid structure, function, and cosmesis
- Develop a systematic approach to eyelid trauma repair based on severity of injury, available techniques, and sequence of repair

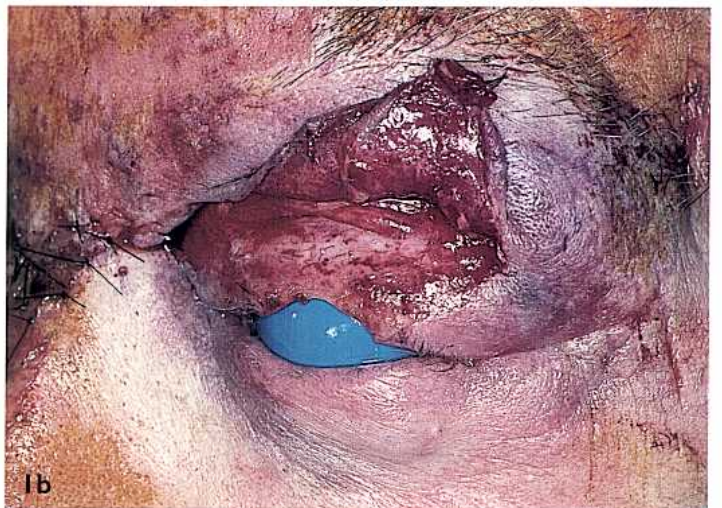
**Key Words:** canalicular anatomy, debridement, eyelid, flaps, medial canthal tendon, sequence of repair, tarsal repair, trauma

## General Considerations in Eyelid Repair

Cardiorespiratory stability is the first priority of the surgeon who initiates the care of a trauma patient. When this requirement has been satisfied, regional problems can be addressed. The initial priority in the management of periorbital trauma is assessment of ocular function and integrity of the eye. Wound and skeletal assessment follows ocular evaluation.

### Assessment

The eyelid contains two principal functional elements: the protractors, located in the anterior, and the retractors, located in the posterior lamellae. The orbicularis oculi and the levator palpebrae superioris are separated by the septum orbitale and its associated fascia. As an anatomic unit, the periorbital region possesses certain characteristics of importance in trauma surgery. Within the boundaries of the orbital walls, the eyelid skin is thin and contains an abbreviated dermis. As a consequence, lacerating objects may penetrate the skin and injure elements of the internal lamellae as well as the globe. These deeper injuries may be obscured from direct view when they parallel the relaxed skin tension lines, since the wound edges rarely gape to reveal the depth of the wound. The presence of any eyelid laceration, regardless of a seemingly insignificant appearance, therefore, mandates careful exploration of the wound and examination of the eye. In



**Figure 1.** Degloving traumatic injury. 1a: Contusion occurred when this patient struck his eyelid on the edge of a sink. 1b: The traumatic dissection degloved the anterior lamella leaving septum intact. Skin avulsion appeared extensive, but when unrolled, the skin loss was minimal. (Reprinted with permission from Stewart WB, ed. *Surgery of the Eyelid, Orbit, and Lacrimal System*. Ophthalmology Monograph 8, vol 1. San Francisco: American Academy of Ophthalmology, 1993:177.)

addition, the eyelid skin possesses great potential for primary contracture and extensive lacerations; in particular, tricorner varieties may create the illusion of avulsion when, in reality, the edges of the skin are often merely rolled inward (see Figure 1).

### Repair

When multiple areas and functional subunits of the eyelid are injured, the sequence of repair is often strategically important. For example, if a canalicular injury coexists with a laceration at a distant site on the same eyelid, the canaliculus is repaired first. The