Complications in Eyelid Surgery

Kaveh Karimnejad, MD, Scott Walen, MD, FRCS(C)*

KEYWORDS

• Eyelid • Complications • Blepharoplasty • Eyelid reconstruction • Oculoplastic surgery
• Facial plastic surgery

KEY POINTS

- Preoperative consultation, ophthalmologic/eyelid examination, planning, and meticulous surgical technique are paramount in avoiding postoperative complications after eyelid surgery.
- Counseling the patient about what they can expect in the days to weeks after eyelid surgery is extremely important.
- Complications can range from those that are inherent to any surgery (infection, bleeding, scar) to severe complications that are irreversible (blindness).

INTRODUCTION

The upper and lower eyelids serve functional and cosmetic purposes. Functionally, the eyelids serve to protect the globe from injury. They are also vital to globe protection through the maintenance of tear film, distributing tear film over the cornea, and to regulate the physiologic flow of tear film. The eyelids and periorbital region are central to the perception of facial beauty and aging. The anatomy of the upper and lower eyelids is complex, and altering one structure may have consequences for the entire anatomic unit. A successful surgical procedure preserves the vital function of the eyelid, while maintaining proper symmetry and aesthetic proportions.

Cosmetic blepharoplasty is one of the most common surgical procedures performed in the United States.[1] The main purpose of blepharoplasty is to restore a youthful appearance and bring attention back to the eyes. Eyelid reconstruction, particularly after skin cancer excision, is also common given the high frequency of skin cancer in the general population.[2] Most postoperative eyelid complications are transient and easily treated (infection, granuloma), whereas there are select complications that can have significant consequences (ptosis, ectropion, irreversible blindness) (**Boxes 1** and **2**). Complications resulting from eyelid surgery are prevented by detailed patient analysis, meticulous surgical technique, and appropriate postoperative care.

PREOPERATIVE HISTORY

Before planning any surgery involving the periorbital region, a thorough patient history must occur (**Box 3**). During this history, it is of upmost importance that patient motivations and expectations are discussed. During the history, the surgeon should look for potential "red flags" that may predispose the patient to complications in the intraoperative or postoperative period (**Box 4**). The patient must provide a detailed list of all medications, including herbals and supplements. The use of anticoagulants and antiplatelet medications is important in that these may cause problematic bleeding, but stopping these medications in the perioperative period is a complex decision and should be done in concert with the patient's

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Department of Otolaryngology-Head and Neck Surgery, Saint Louis University, 3635 Vista Avenue, 6FDT, St Louis, MO 63110, USA
* Corresponding author.
E-mail address: swalen@slu.edu

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Box 1
Functional eyelid complications

- Suture granuloma
- Infection
- Epiphora
- Eyelid hematoma
- Lagophthalmos
- Dry eye syndrome
- Eyelid retraction
- Chemosis
- Diplopia
- Ptosis
- Corneal abrasion/ulcer
- Retrobulbar hematoma
- Blindness

Box 3
History key points

- Patient expectations/motivations
- Ophthalmologic history
- Dry eye symptoms? (burning, foreign body sensation)
- Medications/herbals (anticoagulants/antiplatelet drugs)
- Does the patient use artificial tears?
- Systemic diseases/neuromuscular diseases
- Previous ocular procedures (laser in situ keratomileusis)?
- Previous cosmetic procedures/surgery?
- Relevant scarring history?
- Tobacco use
- Workplace hazards?

primary care physician.[3] In addition, the use of artificial tears regularly or on an as needed basis must be determined because many patients may not consider artificial tears as a medication.

In eyelid surgery, there are specific elements within the medical history that are specifically of concern. A history of other ophthalmologic conditions, dry eye symptoms, previous orbital surgery, systemic diseases, neuromuscular conditions, and scar formation should be discussed before surgery. When discussing ophthalmologic conditions or procedures, a history of laser in situ keratomileusis is important because it may predispose the patient to dry eye symptoms after surgery.[4] Systemic diseases and neuromuscular conditions to be aware of include Graves disease, Sjögren syndrome, rheumatoid arthritis, Bell palsy, and myasthenia gravis. Scar formation is an important topic to address because certain patients, particularly those with darker skin pigmentation, may be predisposed to poor scar or keloid formation.

Box 2
Cosmetic eyelid complications

- Wound dehiscence
- Suture milia
- Suture granuloma
- Scar/web formation
- Chemosis
- Ptosis
- Deep superior sulcus
- Lower eyelid hollowing
- Eyelid crease asymmetry
- Overcorrection
- Undercorrection

PERIOCULAR/OCULAR EXAMINATION

A thorough periocular and orbital examination should be performed in any patient undergoing cosmetic or functional procedures of the eyelid (**Box 5**). Ideally, a visual acuity measurement should be undertaken using a standard eye chart. The reactivity of the pupils and ocular motility should also be recorded. A slit-lamp evaluation is a standard examination to rule out any ocular surface irregularities and is a common examination performed by an ophthalmologist. If a surgeon does not routinely perform the previously

Box 4
"Red flag" patients

- Psychiatric/psychological difficulties
- Recent motivations (job/divorce)
- Unrealistic expectations
- Dry eye symptoms
- Thyroid orbitopathy (Graves disease)
- Anticoagulants/antiplatelet medication
- Lower lid laxity
- Scleral show
- Negative vector eyelid