Eyelid Fistula Following Wies Entropion Repair

Philip L. Custer, M.D.

ABSTRACT
Fistula formation following eyelid surgery is uncommon. A patient developed an eyelid fistula and tearing shortly after a Wies entropion procedure and was effectively treated by excising the involved portion of the eyelid.

A variety of procedures have been developed for the treatment of involutional entropion. In 1954 Wies published a technique utilizing a full-thickness blepharotomy, which involved placing a transverse incision 4 mm below the eyelid margin. Sutures were used to externally rotate the marginal portion of the eyelid. Additional sutures approximated the skin edges.

The Wies procedure has proven to be an effective method of entropion repair with few complications. Overcorrection with resultant postoperative ectropion may occur, but usually is reversible with the early removal of the rotational sutures. Proper placement of the incision will avoid other possible problems, such as necrosis of the eyelid margin. The following case presents an unusual complication of the Wies procedure.

CASE REPORT
A 73-year-old white woman was examined for chronic tearing of the right eye. She reported that bilateral entropion surgery had been performed previously.

The right lower eyelid had been repaired with a wedge resection of tarsus and conjunctiva on September 1, 1982. There subsequently was a recurrence of the entropion. On August 27, 1985 a Wies procedure was performed. The operative note from this procedure described a full-thickness, transverse blepharotomy located 3 mm below the eyelashes. Rotational sutures were placed, and the skin was closed with a running 7-0 silk suture. The immediate postoperative period apparently was unremarkable. However, tearing of the right eye occurred several weeks following surgery.

The patient was first examined by the author on February 7, 1986. She had a linear scar across the right lower eyelid. A fistula was present in the central portion of the scar (Figure 1). This epithelial-lined tract passed between the inferior fornix and the skin surface. Tears were noted to flow through the fistula and run down the patient's cheek. A mild punctal ectropion was also present. Irrigation through the inferior canaliculus demonstrated a patent nasolacrimal system.

Reconstructive surgery was performed on the right lower eyelid on March 28, 1986. The procedure involved horizontal tightening of the eyelid under a myocutaneous flap. The eyelid was shortened with a pentagonal block resection of that portion of the eyelid containing the fistula. The lower eyelid retractors were incidentally noted to be detached and were sutured to the inferior edge of the tarsus. The patient did well following surgery and the tearing resolved. Histologic examination of the excised tissue demonstrated a fistulous tract lined by metaplastic, keratinized conjunctival epithelium (Figure 2).

DISCUSSION
An eyelid fistula is an unusual cause of tearing. Fistulas between the lacrimal sac and skin may develop following trauma or dacryocystitis. Congenital lacrimal sac fistulas also may occur.4 Lacrimal gland fistulas with tearing have been described.4 It is surprising that fistula formation has not been a more frequent complication of procedures employing full-thickness eyelid incisions. Wies commented about the lack of

Dr. Custer is in Ophthalmic Plastic and Reconstructive Surgery, private practice, St. Louis, Missouri.
Reprint requests should be addressed to Philip L. Custer, M.D., 17305 W. Pavilion, Barnes Hospital Plaza, St. Louis, Missouri 63110.

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postoperative fistulas in the procedure he described, while Markovits warned of this complication. There are several possible causes of the development of a fistula in this operation. Improper rotational suture placement may lead to total eversion of the marginal eyelid and poor approximation of the skin edges. This could result in direct contact of the eyelid skin with the conjunctiva of the inferior fornix. Excessive tension on correctly placed rotational sutures may cause imbrication of the conjunctiva. A localized fistula could develop if the suture should "cut out" through the skin surface. Any compromise of the marginal vascular arcade may lead to localized necrosis of the eyelid margin. Secondary healing of this area could result in an eyelid fistula.

The patient presented in this report had an additional predisposing factor for the creation of an epithelial tract. The previous wedge resection may have caused a small cul-de-sac of conjunctiva within the eyelid. This conjunctiva may have been externalized with the second (Wies) procedure. Impaired lacrimal outflow from the nasal ectropion could have contributed to the maintenance of the fistula patency.

Fistula formation fortunately occurs rarely following the Wies procedure. Patients who have had previous eyelid operations may be at increased risk for developing this problem. Fistula formation and other complications can be minimized by employing the surgical technique described by Wies. Proper suture placement and accurate skin closure are essential.

REFERENCES