Suture repair of entropion

TREVOR J.P. HODSON MB BS, FRACS, FRACO

An involutional entropion can be quite uncomfortable and can lead to the development of a corneal ulcer. A simple bedside suturing procedure can provide effective relief.

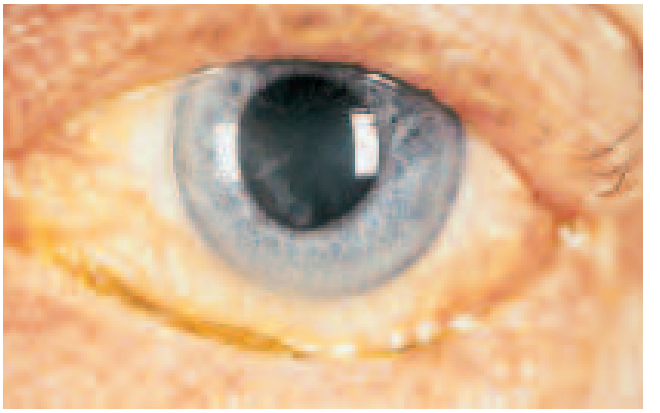

Figure 1. An involutional entropion of the lower eyelid.

An involutional entropion occurs when the lower eyelid turns inwards, causing the eyelashes to rub against the globe (Figure 1). It is usually seen in older patients, and should be distinguished from an entropion caused by conjunctival scarring resulting from trachoma, ocular pemphigoid or Stevens–Johnson syndrome.

Forced closure of the eyelids will produce a typical appearance with the eyelid margin rolling over, placing the lashes in contact with the cornea. Downward traction on the eyelid will restore the normal relationship of the eyelid to the globe, but this response will usually be lost when the patient blinks again. The in-turned eyelashes abrade the cornea and may produce a corneal ulcer if not remedied. In the initial stages, signs and symptoms may be intermittent.

An involutional entropion is quite unsettling. Many patients who are affected are infirm and may be in nursing home accommodation. A simple suturing procedure called the Quickert procedure provides effective relief and can be performed at the bedside. The procedure may be repeated if the condition recurs, after advice from an eye surgeon.

Equipment

You will need the following instruments:

- fine needle holders
- fine-toothed forceps
- 5/0 or 4/0 chromic cat gut suture on a 12 mm cutting needle
- scissors

The following items will also be required:

- local anaesthetic (2% xylocaine)
- a 2.5 mL syringe and a 25-gauge needle

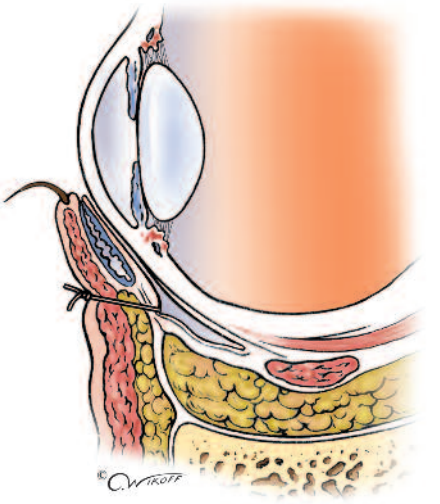

Figure 2. A cross-section of the eyelid showing the suture position in relation to the lower border of the tarsal plate.

- povidone–iodine (Betadine)
- a disposable dressing pack
- a sachet of normal saline
- antibiotic ointment (chloramphenicol 0.5% [Chloromycetin, Chlorsig])
- topical anaesthetic drops (amethocaine [Minims])
- an eye pad and tape.

Preparation

When the patient is ready in either the sitting or lying position (as preferred), drops of local anaesthetic are instilled into each eye to reduce the risk of discomfort if the skin preparation fluid spills into the conjunctival recess. The skin around the eye is then cleaned with povidone–iodine.

Local anaesthetic (2 to 3 mL) is then infiltrated into the lower lid. The needle should enter the eyelid from the lateral aspect about 10 mm below the eyelid margin. The patient can be asked to look up during the injection.

Dr Hodson is an ophthalmologist in private practice at the Mount Gambier Eye Centre, Mount Gambier, SA.

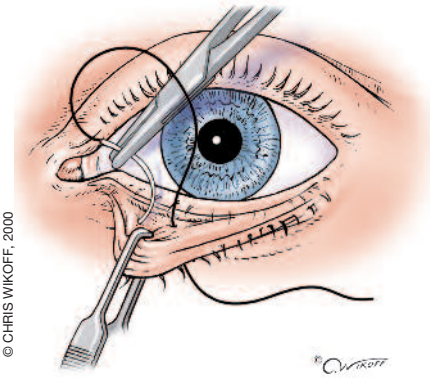

Figure 3. The eyelid is secured by forceps gripping the skin and conjunctival surface before the needle is passed through the eyelid.

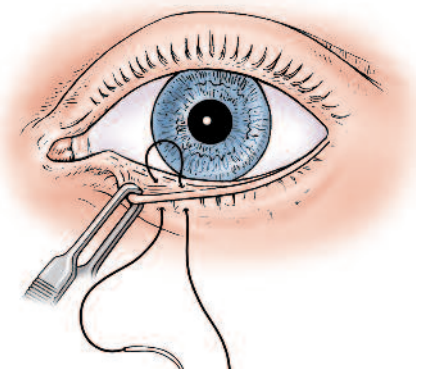

Figure 4. Diagram showing the suture path after two passes of the needle.

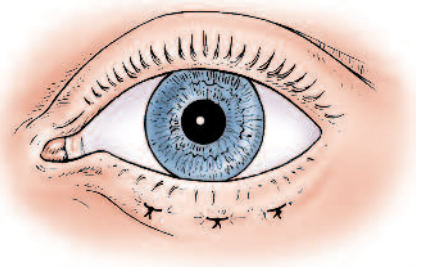

Figure 5. Appearance of the eye after all three horizontal mattress sutures are tied.

The procedure

Three horizontal mattress sutures are placed through the full thickness of the lower lid. The sutures are spaced equally along the lid with approximately 2 mm between the bites.

The technique was originally described using double-armed sutures passed from the conjunctival surface to exit the skin externally. A similar result can be obtained using a single needle. The needle path is shown in Figure 2.

The eyelid is secured by placing the fine-toothed forceps across the eyelid so that the forceps grip both the skin and conjunctival surface (Figure 3). The points of the forceps should be about 10 mm below the eyelid margin (that is, placed at the lower border of the tarsal plate). The needle is then passed from the skin surface through the full thickness of the eyelid to exit in the conjunctival recess; without letting go of the forceps, the needle is then pulled through.

For the second pass, the eyelid is again secured with the forceps, a few millimetres from the first pass. This time the needle is passed from the conjunctival surface to the skin (Figure 4). The suture can be tied off at this point or the ends can be trim-med to allow for tying when the other two sutures have been placed.

When the sutures are tied you should notice that the eyelid appears to be slightly everted (Figure 5). Antibiotic ointment is then applied and a pad can be used to cover the eye until the following day.

After care

On subsequent days, the eye may need to be bathed if there is any discharge before instilling the antibiotic ointment. The ointment can be stopped after seven days and the patient is normally reviewed after two weeks. The sutures do not need to be removed and the effect on the eyelid position is normally present for months after the procedure. MT