SURGICAL MINUTIAE

SURGICAL REPAIR OF MEDIAL ECTROPION

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Ectropion is a common eyelid malposition with various causes. The medial part of the eyelid contains the lacrimal punctae. Their apposition to the globe and situation in the lacrimal tear lake is important for normal drainage of tears. Ectropion of the medial aspect of the lid, with or without ectropion of the remainder of the lid, inhibits tear drainage and leads to watering and epiphora. It is therefore important to deal with even minor degrees of medial ectropion in order to re-establish normal tear drainage.

Several abnormal features may be present in an ectropic lid¹ and include horizontal lid laxity, medial canthal tendon laxity, punctal malposition, vertical tightness of the skin and orbicularis paresis. The choice of surgical procedure is dependent on the presence or absence of these features.

The 'lazy-T' procedure was first described by Smith² in 1976 and is commonly used to correct lower lid ectropion with punctal eversion (Fig. 1). There are two elements to the procedure which can be used independently or in combination:

1. A full-thickness wedge excision to horizontally shorten a lax lid which has normal canthal tendons.
2. An excision of a diamond-shaped portion of tarso-conjunctiva³ below the punctum to vertically shorten the posterior lamella of the lid in order to correct the punctal ectropion where no vertical tightness of the skin exists.

The full-thickness wedge excision of the lower lid is performed just temporal to the diamond excision of tarso-conjunctiva. The closed wounds form a T lying on its side known as a 'lazy-T' from cattle branding.

Surgical Procedure^{4,5}

The procedure is easiest to perform under local anaesthesia since movement of the eyelid helps in the

identification of the lower lid retractors during surgery. Lignocaine 1% with adrenaline 1 in 200 000 is injected into the medial half of the lower lid and amethocaine drops instilled into the lower fornix.

The first cut is made perpendicular to the lid margin, 4 mm lateral to the punctum, leaving sufficient room for the diamond excision, and extends to the lower end of the tarsus. The lateral portion of the lid is draped across the incision until the lid laxity is eradicated. A second cut is made at the point of overlap, once again perpendicular to the lid margin and therefore not parallel to the first cut. The cuts are joined to form a pentagon (Fig. 2). Haemostasis is attained and the wound left open at this stage.

A Bowman probe is placed in the inferior canaliculus to protect it from being sutured and the medial aspect of the lid is everted over a cotton bud. The aim is to excise a diamond-shaped portion of conjunctiva and tarsus whilst avoiding cutting the orbicularis muscle. The apex of the diamond should lie below the punctum, leaving sufficient space for passage of a suture. The vertical dimension is between 4 and 6 mm depending on the degree of punctal ectropion and the horizontal dimension between 6 and 8 mm.

The initial tarso-conjunctival incisions usually precipitate brisk bleeding which hinders the view of the operative field. In order to maintain a diamond-shaped incision it is easiest to make two parallel incisions with a No.15 blade (Fig. 3). The conjunctiva and tarsus between these incisions are undermined and the diamond excision completed with spring scissors. The diamond is closed with a 6/0 long-acting absorbable suture with the knot tied within the wound. The superior apex of the tarso-conjunctiva is picked up in one suture bite (Fig. 4) and the inferior apex together with the lower lid retractors is picked up in the other bite. Ensure that a firm bite of the retractors is taken as their action will help invert the punctum. They lie just below the tarsus and are more prominent on the lateral aspect of the diamond.

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Fig. 1. **Fig. 2.** **Fig. 3.** **Fig. 4.** **Fig. 5.** **Fig. 6.**

Fig. 7.

Under local anaesthesia a tug can be felt on the grasped retractors when the patient looks down. If it is difficult to find the retractors from within the diamond, the lower suture can be passed laterally, between tarsus and orbicularis out of the diamond into the wedge excision (Fig. 5) where the retractors will be lying in the lower part of the pentagon. A firm bite of the retractors is taken (Fig. 6) and the suture is passed back to the diamond. When the suture is tied it should both close the wound and invert the punctum, especially on downgaze.

The wedge excision is then closed in layers. Several long-acting absorbable sutures are placed partial thickness through the tarsal plate to accurately unite its two parts (Fig. 7). The knots are tied on the front surface of the tarsus to avoid corneal abrasions. The lid margin is then closed with two silk sutures, one through the grey line and one through the lash line. To avoid these suture being too shallow, the suture bites should follow the curve of a half circle. They are tied under enough tension to make the wound pout slightly (Fig. 8). The remaining skin is sutured with interrupted silk sutures and the long ends of the lid margin sutures are tied into the

Fig. 8.

top skin suture knot to prevent them rubbing against the cornea. Any 'dog-ear' of skin at the base of the wedge resection can be excised as a base-down triangle.

Antibiotic drops are prescribed post-operatively for 7 days and the patient is instructed to insert them by lifting the upper lid rather than pulling down the lower lid which could result in wound dehiscence. The lid margin sutures should remain in position for at least 10 days and thus it is easiest to remove all the skin sutures at this time.

Key words: Lazy-T procedure, Medial ectropion.

REFERENCES

1. Frueh BR, Schoengarth LD. Evaluation and treatment of the patient with ectropion. *Ophthalmology* 1982; 89:1049-54.
2. Smith B. The 'lazy-T' correction of ectropion of the lower punctum. *Arch Ophthalmol* 1976;94:1149-50.
3. Tse DT. Surgical correction of punctal malposition. *Am J Ophthalmol* 1985;100:339-41.
4. Collin JRO. A manual of systematic eyelid surgery. 2nd ed. London: Churchill Livingstone, 1989:27-31.
5. Tse DT. Color atlas of ophthalmic surgery: oculoplastic surgery. Philadelphia: JB Lippincott, 1992:126-9.