CONGENITAL PTOSIS: A GOOD COSMETIC RESULT WITH REDEFINITION AND SUTURING OF THE ORBITAL SEPTUM

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SUMMARY

A surgical technique employing orbital septum sutures during ptosis surgery in children is described. A retrospective study of 16 children (age range 6 months to 14 years) undergoing surgery for congenital ptosis over a 6 year period was undertaken with regard to cosmetic outcome. All surgery was performed by one consultant ophthalmic surgeon with the patient under general anaesthesia. A standard levator resection was undertaken, following which the orbital septum was redefined and sutured with interrupted 5-0 catgut. This resulted in a well-defined lid crease post-operatively, with a good cosmetic outcome. The only significant post-operative complication was the occurrence of a suture-related granuloma in one patient. All achieved a good cosmetic result. A mild residual ptosis occurred in 3 cases, requiring a further procedure. Special attention to suturing of orbital septum as a separate tissue layer during levator resection for congenital ptosis gives good lid crease definition which may enhance the overall cosmetic outcome.

The formation of the upper lid skin crease is an important consideration in ptosis surgery. This is particularly important in unilateral ptosis, as failure to establish both good lid crease formation and placement may give a poor cosmetic result. An inadequately defined or malplaced skin crease will give an asymmetrical and unsatisfactory appearance even if the correct lid height is achieved post-operatively.

A small series of children undergoing surgery for congenital ptosis is described. Orbital septum sutures were used to define the lid crease, giving a good cosmetic outcome.

PATIENTS AND METHODS

Sixteen children undergoing levator resection over a 6 year period were assessed with regard to post-operative cosmetic appearance. Three cases were bilateral. The average age at the time of surgery was 4 years (range 6 months to 14 years). Eight patients were male and 8 female. The average follow-up was 2 years 5 months (range 3 months to 4 years 2 months). All surgery was performed by one consultant ophthalmic surgeon with the patient under general anaesthesia.

The surgical technique comprised levator resection by an anterior approach (Fig. 1), following which the orbital septum was sutured along its entire length with interrupted 5-0 catgut (Fig. 2), some sutures having been pre-placed. The overlying orbicularis was also repaired, and the skin closed with interrupted 6-0 vicryl. A 4-0 silk tension suture was placed through the margin of the lower tarsus, taped to the forehead and removed after 24 hours.

RESULTS

A good cosmetic result with lid crease definition was obtained in all cases (Fig. 3). The only significant

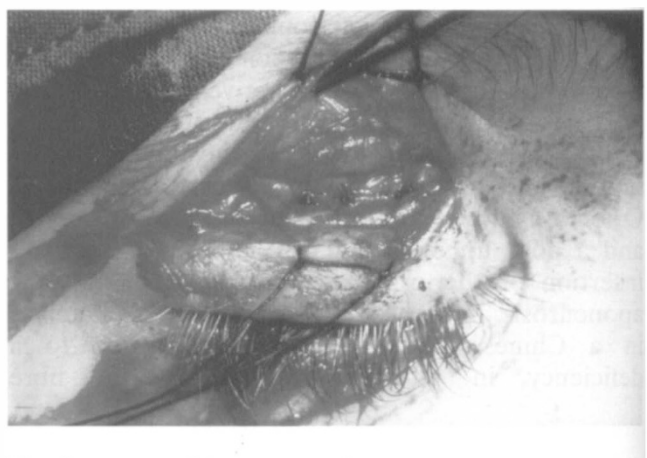

Fig. 1. *Resected levator muscle.*

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Fig. 2. *Suturing of orbital septum.*

post-operative complication was the development of a suture-related granuloma in one patient which did not influence the final outcome. Good lid height was obtained in 15 lids; however, 3 cases required a further surgical procedure at a later date for residual ptosis. Reoperation was uncomplicated and the final outcome was successful.

DISCUSSION

In congenital myogenic ptosis, levator function is thought to be reduced as a result of developmental dystrophy of the levator muscle, normal muscle fibres being replaced by fibrous connective tissue without contractile properties.[1] Characteristically the eyelid ptosis is more marked in upgaze and may be relatively retracted in downgaze – in contrast to acquired ptosis where lid position tends to be similar in all positions of gaze.

When undertaking surgery in children with congenital myogenic ptosis, a good cosmetic outcome is important. In addition to good lid height post-operatively, the position of the upper eyelid crease will enhance the overall cosmesis.

In adult ptosis surgery, adjustable sutures are becoming more popular, enabling the lid height to be adjusted to achieve the optimal result without altering the skin crease position.[2] However, this procedure is not readily tolerated in young children. It is therefore important to consider an alternative technique which allows for good lid height in addition to skin crease formation.

The ideal procedures in ptosis surgery are those which least disturb normal anatomy but also allow for good results.[3] In our study, an anterior approach was selected, thus avoiding damage to the conjunctiva, lacrimal gland and tarsus.[4] In all cases in this series, following levator resection the cut edges of the orbital septum were reapposed and sutured along its entire length. By redefining the original anatomical layers, suturing of the orbital septum prevents orbital fat prolapse and allows for close re-apposition of

(a)

(b)

Fig. 3. *(a) Pre-operative ptosis. (b) Post-operative lid crease.*

tissue, and so may enhance the overall cosmetic outcome. Alternative methods for defining the lid crease in congenital ptosis have been described, in particular closure of the skin incision with deep bites to the underlying levator aponeurosis.[5,6] The tension suture allows for good corneal coverage and helps to produce a smooth lid curve.

In conclusion, although many procedures have been described in the surgical management of congenital ptosis, little emphasis has been placed on maintaining the integrity of the orbital septum. This study indicates that the placement of orbital septum sutures directly following levator resection, in order to re-establish the original anatomical relationship of tissues, allows for close tissue apposition and so may aid the formation of a well-defined and positioned skin crease, thus enhancing the cosmetic outcome.

Key words: Congenital ptosis, Cosmesis, Orbital septum sutures.

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