Orbicularis Plication for Ptosis

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Abstract

The orbicularis oculi muscle is carefully dissected from the skin and is exposed up to almost the lid margin. The distal fibres then are joined to the proximal orbicularis fibres. The skin flap is sutured back in place.

Introduction

The technique of orbicularis plication for ptosis was developed by Dr. Daljit Singh of Amritsar. In effect this means the revolutionary idea of making the same muscle do exactly opposite actions, in the same position. It was first presented at the conference of the American College of Eye Surgeons, at Miami, Florida, USA in February 2001. The results shown were very impressive. He has done over 265 cases. The paper was published in the Annals of Ophthalmology in 2006.

The most common cause of ptosis is poor levator action, which is usually congenital. Up till now, the only two available surgical techniques were the levator resection and the frontalis sling. Even though levator ‘strengthening’ is the logical thing to do, very often its action is so poor, and the muscle is even so fibrotic that, little is gained by way of dynamic function. The same applies to the frontalis sling of strips of fascia lata or even sutures, both of which are totally inelastic, making them both functionally and, even cosmetically unacceptable. Both the surgical techniques have unpredictable results and often lead to lid lag and, or, lagophthalmos.

Method

The skin is incised near the upper orbital margin, just below and parallel to the eye brow. The skin is carefully separated from the underlying orbicularis muscle fibres, up to about 0.5 cm above the lid margin. The distal muscle fibres near the lid margin are then joined to the proximal fibres by means of three 6 zero Vikryl mattress sutures, thus pulling up the lid. The skin is sutured back with interrupted 6 zero silk. A firm dressing is given to prevent bleeding and is left in place for 48 hours. The dressing is repeated for 24 hours more, and then the wound is left open to heal, with thrice daily application of ung. Neosporin. The skin sutures are removed after about 10 days to 2 weeks.

Discussion

As mentioned earlier, the ingenuity of the technique lies in making the same muscle do seemingly exactly opposite actions while still in its original attachments. When the eyes are open, the orbicularis is in a relaxed state. In this state, by shortening the muscle, the lid is made to be kept open. The lid will close when the orbicularis contracts, as in its normal action. I prefer to only dissect up to about 0.5 cm above the lid margin because, after plication the skin crease is obtained too (Fig. 3). There is usually what appears to be considerable amount of redundant skin at the end of the procedure. The surgeon may be tempted to excise it. In my experience, it is better to be left alone and will correct itself in time.

The patient in the illustration (Fig. 1) is a 30 year-old male, a driver by profession, had ptosis of left eye
from birth. From Fig. 2 it is clear that levator action was negligible. Two weeks post-op (Fig. 3) the result is quite satisfactory. Frontalis action is nearly totally absent. Fig. 4 shows good closure without any lid lag at all. There is no redundant skin which was apparent at the end of the surgery.

I have found this technique much easier to perform, more satisfying and predictable than either of the two current methods in use.

References