Case Report

Silicone Sling Frontalis Suspension for Correction of Congenital Blepharoptosis

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Abstract:

There are many techniques for treating congenital blepharoptosis. A new surgical technique for ptosis with poor levator function in which Seiff Silicone Suspension set is used in frontalis sling procedure is described in a 12 year old female child with simple unilateral congenital blepharoptosis. This procedure requires less surgical time, provides good cosmesis and early recovery.

Key Words: Congenital blepharoptosis, silicone sling, frontalis suspension, fascia lata.

Introduction:

Congenital blepharoptosis results from a developmental dystrophy of the levator muscle of unknown aetiology. Frontalis muscle suspension is the gold standard for the treatment of congenital ptosis with poor levator function (Wagner et al 1984, Clauser et al 2006). It creates a linkage between the frontalis muscle and the tarsal plate of the upper eyelid. There have been various modifications of performing the sling procedure in the recent past (Goldberger et al 1991, Dailey et al 1991). A number of sling materials namely autologous fascia lata, preserved fascia lata, non absorbable suture material, mersilene mesh etc have been tried (Wasserman et al 2001, Ben Simon et al 2005, Salour et al 2008). In this patient silicone frontalis sling was used for correction of ptosis with a good result.

Fig.I: Clinical photograph of the patient showing severe ptosis in left eye.

Case Report:

A 12 year old female child presented with severe congenital ptosis with amblyopia in left eye (Fig.I). Her vision in right eye was 20/20 whereas in left eye it was 20/200. She was operated under general anesthesia. The pentagon shape was marked over the upper eye lid skin with a marker (Fig.II). The amount of upper lid elevation needed was decided on table. Two incisions were marked just above the lash line each about 3mm long. The incisions were centered approximately 6mm nasal and temporal to the point directly above the centre of cornea. Three eyebrow incisions were given. The central stab incision of about

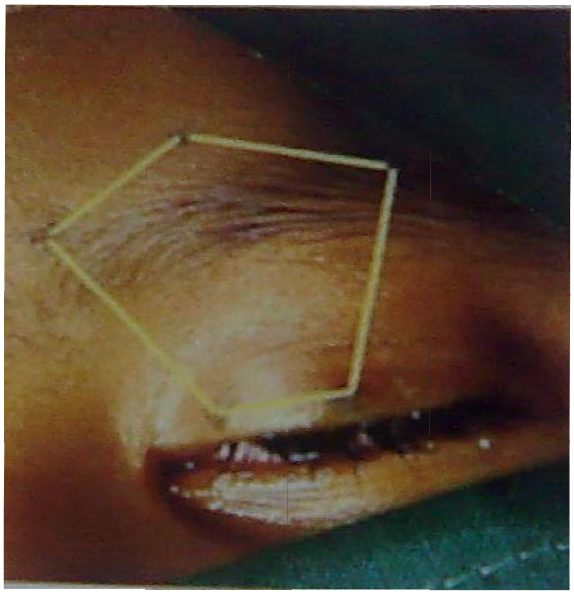

Fig. II: The Pentagon shape marked over the eye lid.

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2mm was put 5mm above the eye brow. The medial and lateral brow incisions were given just above the eyebrow, medial and lateral to their respective lid incisions. Sterile Seiff silicone frontal suspension set was then taken. It has a long silicone tube with stainless hollow rods on both ends with moderately sharp ends. The silicone sling of the set measures about 23.5cm and the rod measures about 6.3cm. One end of the tube was advanced through the supra eyebrow stab incision in the muscle plane. Then it was guided through the lateral eyebrow and eyelid incisions. Once the lateral eyelid incision was reached, the needle was turned horizontally to pass through the medial lid incision and then to nasal eyebrow incision. Care was taken to maintain the muscle plane all throughout the procedure. Finally needle was brought back to the supra eyebrow stab incision and exteriorized. Lid margin height was adjusted according to the amount of correction (Fig.III).

Fig. III: The silicone sling is passed from the temporal eyebrow incision to the middle suprabrow incision.

The two ends of the silicone band were tied, creating minimum 4 knots (Fig.IV). The knots were buried below the subcutaneous layer.

A stay suture was placed with 6/0 vicryl suture to secure the knot in position. The single supra eye brow stab incision was closed with silk suture. Mild pressure bandage was done with antibiotic eye ointment for 24 hours. Lubricating eye drops and ointment were prescribed in post-operative period. The patient was followed for 6 months. Good cosmetic correction was achieved (Fig.V).

Fig. IV: The two ends of the silicone band are tied, creating a simple square knot.

Fig. V: Post operative photograph of the patient showing ptosis correction in left eye.

Discussion:

The advantage of silicone frontalis sling is that it requires small skin incisions and less surgical time. This technique can be performed in all eyes with ptosis and poor levator function, which necessitates frontalis sling. Autologus fascia lata has been proven to be the material of choice in sling surgery for ptosis. (Lee et al 2009; Leibovitch et al 2003) Some known complications of harvesting fascia lata include an unsightly scar in the thigh region, hematoma formation, keloid formation and herniation of the muscle belly. (Grover et al 2005) The silicone material for frontalis sling has been tried successfully (Carter et al 1996; Morris et al 2008). It

has many advantages. It cuts down the valuable operating time.Complications associated with harvesting the fascia lata were not observed. It has greater elasticity compared to fascia lata. Post operatively silicone band can be easily adjusted if there is under or over correction of ptosis. It is easily available and relatively cheaper priced thus making it one of the more economical options for the patient. Lee et al (2009) compared the results of silicone band with preserved fascia lata for frontalis sling operation in congenital ptosis and found better cosmetic results and lower recurrence rate with silicon band.

Simple learning curve, good cosmesis, less number of sutures with better functional results, while retaining the usual advantage of standard sling procedure are the unique feature of this technique.

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