

Upper Eyelid Gold Weight Implantation with Indigenous Design in Facial Palsy

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To evaluate the success of gold weight implants in alleviating the ocular problems associated with facial palsies while at the same time experimenting with indigenously designed implants. Eleven patients with unrecoverable facial palsies were included in this study. Gold weight plate implants designed by the author were implanted under the Orbicularis and sutured to the tarsal plate. Additional procedures were adapted to correct ectropion of lower lid. Follow up period ranged from 12 – 24 months. Signs and symptoms of corneal exposure were corrected in all of patients. Except for one extrusion all the implants took well. Gold weight implants seem to provide a reliable, and effective way of dealing with ocular complications associated with facial palsy.

Key words Exposure Keratopathy, gold implants.

Patient with facial palsy may develop ophthalmic problems. These include increased risks of developing corneal problems as ulcers, thinning of cornea and perforations and infectious perforations ultimately leading to endophthalmitis.

In temporary palsies conservative approach like using ocular lubricants, moist chambers, taping etc. are used. In failed medical therapy or permanent palsies surgical interventions is essential.¹ Gold weight implantation² has become one of the standard procedures to correct upper lid retraction and improve corneal coverage.

Due to non-availability of commercial implants gold weight implants designed by the author and made by the local goldsmiths were used.

Study of eleven patients over a period of twelve to 29 months is given.

Material and Methods:

Patient presenting with Exposure Keratopathy associated with facial palsy were considered for this study. Only those patients were included who in spite of medical therapy were developing corneal problems or were declared to have no chance of improvements by the neurologist. (Table I)

Indigenously designed gold weights varying from 1-1.5 gm weights were used. (Fig. I) They were made in the form of rectangle 25 mm long x 2mm wide and 0.5mm thick.

In addition to two holes drilled on either end, two constrictions were made 7mm from either end. (Fig. I) These constrictions don't exist in commercial designs and were made to provide stronger grip near the center of the gravity of the plate so as to prevent the tumbling effect.

The curvature of the plate was adjusted to fit that of the tarsal plate. Before implantation silver weights stitched to the skin of the lids were used to test appropriate weight needed to properly close the lids (Fig.1).

A horizontal incision was made 4mm away from lid margin. Tarsal plate was adequately exposed. The implant

was stitched with non-absorbable 5/0 ethibond sutures to the tarsal plate at the holes as well as the constrictions. The implant was then covered by muscle and skin stitched in layers.

Seven patients needed procedures to lift lower lid.³ In three patients fascia lata slings were used. In other four lower lid shortening with lateral tarsal strip procedure (modified Kuhnt Szymanowsky's) was used.

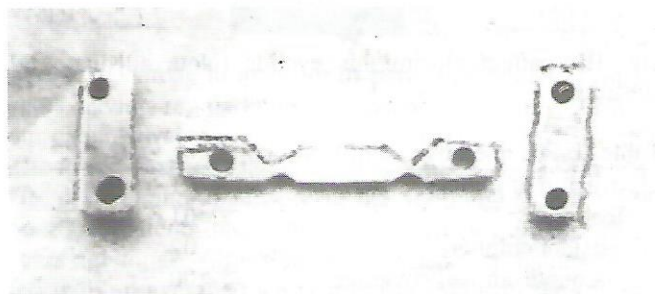


Fig. I: Gold implant (Center. Note holes and constrictions) with trial silver weights.

Table I: Distribution of causes

Causes	No. of cases	%age
Traumatic	05	45
Facioscapulohumeral Muscle palsy	01	09
Parotid tumor removal	02	18
Mastoidectomies	03	27

Results: (Table II)

Satisfactory lid opening and closure was achieved in all patients. (Fig. 2,3)

One patient developed infection and subsequent extrusion of implant.⁴

Adequate lower lid elevation with correction of epiphora was achieved in 5 of the 7 patients mentioned.

Food lid motility was achieved in all patients, which improved with patients getting used to the implant.

Reversal of signs of Exposure Keratopathy like red eye, epithelial abrasions etc., was achieved in all successful cases with marked improvement of dry eye syndrome.

Most of the patients were able to discontinue their medical therapy.

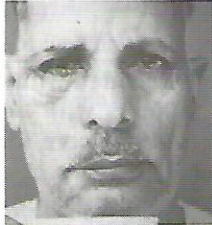


Fig. II: patients looking forwards (Note lid edema on postoperative day).



Fig. III: patient closing his eyelids (Note adequate lid closure).

Table II Postoperative complications

Extrusion of implant	01
Infection	01
Persistent epiphora	02
Inadequate corneal coverage	00
Persistence of exposure problems	00

Discussion

Exposure problems associated with facial palsies have been treated with various procedures including tarsorrhaphy, gold weights, temporalis^{6, 7} and silicon sling procedures like silicon skin procedure.⁸

Gold weight implants provide a very simple way of dealing with inadequate lid closures. This has to be combined with lower lid lifting procedures. The procedure can be done under local anesthesia and the patient can go home the same day.

The procedure has the advantage of being reversible and combinable with other procedures.

It has disadvantage of not correcting lower lid ectropion for which additional procedures are needed.

Due to lack of commercially available implants, indigenously designed implants were used. The design proved to be very successful.

Conclusion

Gold weight insertions are a simple, reliable, reversible, and a successful technique for early rehabilitation of paralyzed eyelids, often combined with lower lid shortening or lifting procedures.

I recommend implantation in facial palsy, inadequate patient compliance or in patients with dry eye syndrome.

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