TEMPORARY TARSORRHAPHY - USE OF COMMERCIAL GLUE (ELFY)

Khawaja Khalid Shoaib, Muhammad Manzoor*, Inam ul haq, Omar Ishtiaq

CMH Mardan, *PNS Shifa Karachi

ABSTRACT

Objective: To assess the use of commercial glue (Elfy) for achieving temporary tarsorrhaphy

Study Design: Case series

Place and duration of study: Study was conducted at CMH Kharian from January to September 2008.

Patients and Method: The various ocular surface disorders which were managed by the temporary tarsorrhaphy with the commercial glue (Elfy) were analyzed. The duration of lid fusion with Elfy and any adverse affects were also noted. Elfy was applied just below the margin of lower eyelid. Then, using a spatula, upper lid was apposed to the lower lid for 1-2 seconds in order to create fusion. If patient required topical treatment, lateral two thirds of the lids were fused and drops instilled through medial one third. In rest of the cases, full length fusion was achieved.

Results: In a total of 32 patients Elfy was applied. Eighteen (56%) were males and 14 (44%) were females. Age ranged from six years to seventy five years with mean age of 22.6 years (SD+21.84). Ocular diseases requiring lid fusion included, infective corneal ulcer/abscess in 21 cases (65.6 %), shield ulcer in vernal keratoconjunctivitis in 3 cases (9.4 %), facial palsy in 2 cases (6.2 %), alkali burns in 2 cases (6.2%), neurotrophic ulcer in 2 cases (6.2 %), Mooren ulcer in 1 case (3.1 %), Grave's disease in 1 case (3.1%). Lid fusion persisted for a mean duration of 7.6 + 4 days (range 2 -20 days). Duration of fusion was less if skin or lashes of upper lid were fused with only skin of lower lid. But it remained for longer duration when eyelashes of both the lids were stuck together. 6 (19%) patients had a burning sensation for fraction of a second, one patient (3%) complained of gritty sensation on skin due to which she removed the Elfy. All the corneal ulcer cases had clinical improvement.

Conclusion: Commercial glue (Elfy) is useful as a temporary measure for tarsorrhaphy.

Key words: Commercial glue, Elfy, Tarsorrhaphy

INTRODUCTION

Classical tarsorrhaphy, temporary or permanent (depending upon its procedure and how long the effect lasts) involves stitching the lid. It is a very effective and safe procedure in the management of nonhealing epithelial defects with a 90.9% success rate[1] however it is not only physically and psychologically traumatic but also eventually leaves some permanent physical changes in lid margin. A procedure which would neither be disturbing for the patient, nor would have any permanent effect is definitely better. Elfy is commercially available popular glue which has been used to unite/ join a variety of materials. We employed it for the fusion of eye lids as a short term measure for the corneal protection. Some may require lateral, central, or total tarsorrhaphy.

Correspondence: Lt Col Khawaja Khalid Shoaib, Head of Eye Dept, CMH Mardan
Email: kkshoaib@hotmail.com
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MATERIAL AND METHODS

A study was done to analyze the various ocular surface disorders which were managed by the temporary tarsorrhaphy with the Elfy from January to September 2008. The duration for which the fusion of two lids persisted with the Elfy and any adverse affects were also noted. Different types of corneal diseases which were managed by the temporary tarsorrhaphy during January to September 2008 with the Elfy were also analyzed to find out the beneficial affect in each type of lesion. Elfy was applied on the lower lid and upper lid was brought into apposition and kept for 1-2 seconds. Many patients were applied Elfy more than once, but for the study of mean duration of fusion that patient was included only once. Data was analyzed by using SPSS 12.0.

RESULTS

In a total of 32 patients Elfy was applied. Eighteen (56%) were males and 14 (44%) were females. Age ranged from six years to seventy

five years with mean age of 22.6 years (SD+21.84). Ocular diseases requiring lid fusion included, infective corneal ulcer/abscess in 21 (65.6%) cases, shield ulcer in vernal keratoconjunctivitis in 3 (9.4 %)cases, facial palsy in 2 (6.2%) cases, alkali burns in 2 (6.2 %)case, neurotrophic ulcer in 2 (6.2 %)cases, Mooren ulcer in 1 (3.1%) case, Grave's disease in 1 (3.1%) case (Table). Lid fusion persisted for a mean duration of 7.6 + 4 days (range 2-20 days). Fusion was of short duration if skin fusion or lashes sticking to skin was achieved and for longer duration if eyelash sticking with each other was achieved. Young patients who had thick eyelashes had fusion for longer duration. 6 (19%) patients had a burning sensation for fraction of a second, one patient (3%) complained of gritty sensation on skin due to which she removed the Elfy. Rest of the patients did not complain or gave impression of any kind. No other adverse effect was noted. In all the corneal ulcer cases, patients had subjective improvement as they described decrease in discomfort and pain as well as improvement of clinical signs.

DISCUSSION

Corneal protection is required in different ailments. Infectious corneal ulcers usually respond to antimicrobial treatment and temporary use of a therapeutic soft contact lens (bandage) lens which may facilitate stromal repair and promote re-epithelialization by protecting the corneal surface from the mechanical trauma of lid movement. Noninfectious ulcers, however, require nonpreserved artificial tears, bland ointments and collagenase inhibitors, but resistant ulcers may need more aggressive therapy with pressure patching, bandage contact lenses[2], amniotic membrane transplantation, tarsorrhaphy, or autologous serum[3]. Ulcers impending perforation require urgent surgical management (e.g., tissue glue, conjunctival flaps- bridge or full Gundersen, or keratoplasty).

In the present study, it was noted that various ocular disorders were benefited by lid closure/fusion achieved by application of Elfy. Fibrin glues[3] and cyanoacrylate[4] adhesives have been used for wound closure and tissue adherence however we used commercial glue as the other glues are not easily available in Pakistan. It has been found more convenient as compared to pad, adhesive tape and various other modalities when requirement is for around one week. Many patients were applied Elfy more than once, whenever it was required. Separation of lids occurred early if skin or

Fig.1: Application of Elfy on lower eye lid and sticking the superior eye lid to the lower eyelid

Fig. 2: Skin of the two lids sticking together 9 days after the application

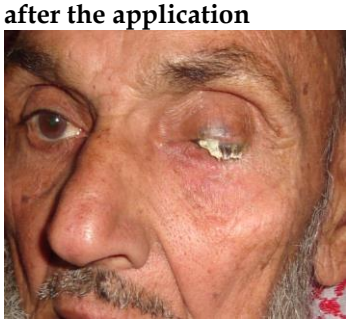

Fig.3: Glue (Elfy) Skin of the two lids has separated but the eye lashes of the lids are still sticking together 12 days after the application

Table: Corneal diseases managed by application of commercial glue (Elfy)

S. No.	Corneal diseases	No. of cases
1.	Infective corneal ulcer	21 (65.6 %)
2.	Shield ulcer in vernal keratoconjunctivitis	3 (9.4 %)
3.	Facial Palsy	2 (6.2 %)
4.	Alkali burns	2 (6.2 %)
5.	Neurotrophic	2 (6.2 %)
6.	Mooren's ulcer	1 (3.1 %)
7.	Graves disease	1 (3.1 %)
	Total	**32**

lashes of upper lid were attached only to skin of lower lid because of early desquamation of epidermis. However if the lashes of the lower lid were adequate, eyelashes of the two lids matted together and partial closure persisted for another week or so, probably because the eyelash growth is very slow (1-1.5 month for complete renewal of eyelash). No side effect like swelling or depigmentation of the skin was noted. Burning sensation on its application was experienced by a small percentage of patients and it too lasted hardly for a fraction of a second. In all the ulcer patients, relief of discomfort/ pain and clinical improvement was significant. It not only provided structural support but also helped in stromal healing and promoted re-epithelialization. Graves' disease requires tarsorrhaphy and orbital decompression but the condition is fortunately uncommon here as compared to the West. Our patient of Graves' disease, fifty year old lady, refused surgery and unfortunately developed exposure keratopathy inspite of vigorous use of artificial tears and eye lubricants. In one patient we combined amniotic membrane transplant with Elfy application. Antiobiotics/antifungal drops in infectious and steroids in allergic cases were administered through medial quarter of the palpebral fissure. Shield ulcers in vernal keratoconjunctivitis cases were given subconjunctival Triamcenolon injection in the upper lid before the lid fusion. Mooren ulcer case was managed on 1% topical drops and systemic cyclosporin. Descemetocele, bullous keratopathy and rheumatoid arthritis related corneal melt, can be helped temporarily with Elfy but as the condition usually persists these are good candidates for other procedures.

CONCLUSION

Commercial glue (Elfy) is useful as a temporary measure for tarsorrhaphy.

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