RETROPOSITION OF THE CONJUNCTIVA A NEW APPROACH TO TRACHOMATOUS ENTROPION*

BY

A. KAHÁN AND R. VÉN

*From the Clinic of Ophthalmology, University of Szeged, Hungary
Director: Professor Dr. F. Kükán*

THE results of tarsectomy following trachoma are often unsatisfactory. The shrunken conjunctiva pulls the lid margin of the upper lid in, and tends to produce lagophthalmos. The greatest danger of ill-performed tarsectomy is the production of xerosis of the conjunctiva following damage to the ducts of the lacrimal gland. Cosmetically, the skin, deprived of its support, overhangs the lashes (Fig. 1, right eyes).

FIG. 1.—Effect of surgery in two cases. Tarsectomy of the right upper lids and repositioning of conjunctiva of left upper lids.
Note blepharochalasis-like aspect of right upper lids.

These complications follow retraction of the conjunctival flap and we aimed at fixing the flap in its retracted position (forming the tarsal fold at the same time) and coating the uncovered inner lid surface by a mucous membrane graft.

Technique

After 0.1 ml. 4 per cent. Novocain with adrenaline has been injected into the lid margin, the lid is everted with the aid of three bridle sutures over a spatula. The same solution is injected under pressure through a 20-gauge cannula introduced temporally and advanced superficially beneath the conjunctiva, so that the lid becomes swollen and separated from its support. With a keratome, held per-

pendicularly to the plane of the marginal lid strip, a section is made through the tarsus at the marginal borderline of the sulcus subtarsalis. The knife is introduced at the temporal end of this section and slid along the convex margin of the tarsal plate to counterpuncture the nasal end. The swollen conjunctiva is separated from its support (Fig. 2). Undermining beyond the tarsal plate should be avoided and no scars should be produced in the vicinity of the lacrimal glands. Thereafter the tarsal plate (and scars in the case of re-operation after tarsectomy) is completely removed. Three double-armed silk sutures are evenly distributed over the cut margin of the flap and, after the flap has retracted, the stitches pierce the skin at the line of the tarsal fold. These stitches fix the retracted flap, leaving an area uncovered (Fig. 3) to be coated with a mucous membrane graft which is taken from the lip.

FIG. 2.—Slicing of conjunctival flap.

FIG. 3.—Conjunctival flap fixed by three stitches through the skin in its retracted position, leaving part of the inner surface uncovered.

The graft is laid on the uncovered area of the lid and stitched with the second needles of the double-armed sutures. The sutures are tied over rubber on the skin, folding the skin and joining the conjunctival flap and the graft in the depth of the fornix. Three double-armed sutures are placed in the lower margin of the graft and the needles are directed towards the lashes through the gap between the skin and the tarsal strip (Fig. 4). The sutures are tied on the margin over rubber (Fig. 5).

FIG. 4.—Free edge of graft pulled by sutures to the margin.

FIG. 5.—Appearance after tying last sutures.

The bridle-sutures are discarded and a bandage applied. The sutures are removed on the sixth day. The procedure may be performed in the same way on

the lower lid. When carried out simultaneously on both lids the operation does not take more than 25 minutes.

Results

The operation described was performed on thirty cases (Table).

TABLE
PARTICULARS OF THIRTY OPERATIONS

Lid		Operation			Retroposition		Entropion	
Upper	Lower	First	Second	Third	Total	Partial	Trachomatous	Non-trachomatous
21	9	16	9	5	27	3	27	3

Though designed originally for the upper lid, it proved to be the method of choice for the relief of cicatricial entropion of the lower lid as well. It was performed with complete success in three cases where the marginal plastic procedure of van Millingen failed; the restoration of the normal lower fornix, the hidden position of the graft, and its prevention from desiccation are further advantages of the new procedure.

The operation was successful in 29 out of thirty cases. In four eyes the upper and lower lids were grafted. The smooth inner surface of the lids is said to be comfortable and xerosis and pannus are cleared.

Discussion

The favourable effects of mucous grafts are mechanical and biological. In the late stages of trachoma, the fornices shrink and consequently fail to act as reservoirs for tears. This procedure restores these physiological reservoirs, as measured by a 2 to 3-fold dilution of instilled fluorescein (Nover and Jaeger, 1952). The causative agents of trachoma are presumed (Poleff, 1951) to infect the epithelial cells of the graft and to enhance the formation of antibodies by multiplying. At the same time, they lose their pathogenicity. No inclusion bodies, however, were found in one of our transplants.

Summary

In thirty cases of cicatricial—mostly trachomatous—entropion of the upper or lower lids, a new type of operation was performed; after tarsectomy and/or extirpation of scars, the tarsal conjunctiva was allowed to retract and was then fixed in the depth of the fornix; the uncovered inner surface of the lid was coated with a mucous membrane graft. The favourable effects are due partly to mechanical factors and partly to the biological effects of the graft.

REFERENCES.

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