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ON GENESIS AND OPERATION OF SENILE ENTROPION

BY

Prof. A. KETTESY

DEBRECEEN

CONTRARY to cicatricial entropion with anatomical changes of the intermarginal surface and of the tarsus, senile (or, as it is sometimes called, spastic) entropion is a simple turning in of the unchanged tarsus of the lower lid.

Under normal conditions the lower lid (correctly its skeleton: the tarsus) is kept in right position by two forces: (1) by the elasticity of the tarso-orbital fascia with the embedded inferior tarsal muscle; (2) by the tone of the orbicularis muscle exerting equally distributed pressure upon the lid. The orbicularis muscle plays the more important rôle. Its normal distribution is maintained by connective tissue branching off between the bundles. Other forces such as capillary adhesion and elasticity of the skin are of less importance.

In senility there is sometimes a slackening of the whole palpebral connective tissue, creating a situation ready to result in entropion: drawing up and accumulation of the bundles of the orbicularis in the lid-margin. The lid is in this phase still in its normal position but unbalanced. Every small pressure at the lid-margin in simple

blinking, is apt to upset the equilibrium, when the tarsus is on a sudden turned in, taking with it skin, muscle, and eye-lashes.

We are able to reset the lid into its original position by simply pulling the skin downwards, thus bringing about normal distribution of the orbicularis muscle.

The inhibiting rôle of the tone of the inferior tarsal muscle was shown by Blaskovics. Instilling cocaine and adrenalin, we increase the power of the tarso-orbital fascia, consequently entropion cannot ensue. The result, of course, lasts only as long as the drug is working.

The majority of the operations for senile entropion act on a similar principle: they increase one or several of the various forces, that are keeping the lid in right position.

Surgical operations have been directed towards (1) shortening of the skin (Celsus, Terrien, Snellen, Hotz, Imre); (2) re-establishing the absent pressure on the convex tarsal margin (Graefe, Koster, Birch-Hirschfeld, Montgomery, Goldzieher, Blaskovics and others); (3) The same pressure is obtained by a triangular excision of the tarsus (Muller); (4) Increasing the tone of the tarso-orbital fascia by operative procedure (Tóth, Trantas); and (5) we might add the proceedings, that are combining several of the above mentioned (Blaskovics).

It is a common feature of all groups that they leave unattacked the decisive factor of the turning in: the accumulation of the orbicularis in the margin, or they touch it only secondarily and insufficiently, hence the relapse occurs mostly very soon, or, trying to get a lasting and satisfactory result by increasing the effect, the entropion turns into ectropion.

Out of the described mechanism ensues the fact that the accumulation of the orbicular muscle is terminal. Therefore, from the practical point of view this is the only cause. All the other conditions are only preliminary.

The solution of the problem is excision of the orbicularis muscle of the lower lid without anything further.

It was Hotz who proposed the removal of the palpebral part of the muscle first, as a detail of his well-known operation originally devised for cicatricial entropion. He excised only some bundles in order to make the tarsal surface bare for putting in his everting sutures.

Our procedure consists of a thorough excision of the muscle, the whole palpebral portion as well as the greater part of the orbital section.

Local anaesthesia. We put a lid-plate into the lower fornix. Pressing it against the lid, we are able to perform the operation in total bloodlessness.

The skin incision is close below the line of the eyelashes. We

undermine the skin downwards as far as the orbital margin, advancing between skin and muscle. The palpebral part of the orbicularis as well as the lower portion of the muscle is thoroughly extirpated with fine forceps and scissors until tarsus and orbital fascia are clearly exposed.

Sutures are superfluous, for coaptation of the wound is faultless.

This little operation gives immediate and lasting result. The muscle being absent, no relapse is possible. There are two parts of the muscle that remain intact: the limbalis and the Riolani, sufficient to maintain normal position and function of the lid.

Over-correction, a delicate point of lid-operations, is not possible. It is well-known that operations for entropion if at all efficacious, easily produce an ectropion, chiefly if there was excision of skin. Removal of skin is in our operation never necessary and therefore absolutely forbidden. Sometimes at the end of the operation the skin appears to be redundant, as it applies itself to the line of the eyelashes in folds. We are not persuaded by this sign to excise the skin, as the consecutive fine cicatrisation smoothes out the skin in a few days.

A NOTE ON THE PHYSIOLOGY OF THE AQUEOUS HUMOUR *

BY

E. BÁRÁNY *and* H. DAVSON

IN recent papers it has been shown (Bárány, 1947, *a*, *b*, *c*), that the rate of penetration of sodium into the aqueous humour is dependent to only a small extent on the blood pressure. The equilibrium concentration of sodium in the aqueous humour and the osmotic pressure of the aqueous are even less affected by a blood pressure reduction. These results have been discussed in relation to certain possibilities of the mode of entrance of sodium, namely:—

(*a*) Secretion in accordance with an equation based on certain assumptions (Kinsey and Grant, 1942).

(*b*) An ultra-filtration process involving an actual bulk movement of fluid.

The possibility of a simple diffusion mechanism as envisaged by Davson and Quilliam (1940), appeared to Bárány to be excluded by Kinsey and Grant's work. The conclusion was reached that bulk movement of fluid was a negligible factor in the penetration of sodium and in the formation of the aqueous humour generally and that the rate of flow of aqueous was only little affected by the intra-ocular pressure.

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