STENOSIS OF THE LOWER CANALICULUS

It was found that photo-micrography before fixation of the vitally stained nerves revealed details lost completely in the process of fixation. This may explain why the two types of nerve fibre have not previously been described (Figs. 6 A and 6 B).

SUMMARY

1. The pattern of the corneal innervation is shown in methylene blue and gold preparations.
2. Two types of nerve fibre are described, occurring in the multifibre nerve bundles: a large beaded one with a fine dendritic link, and a second where the beads are masked.
3. The possibility that the second of these fibres is autonomic is cited.
4. The boutons of the intra-epithelial plexus are clearly demonstrated. They do not end within the epithelial cells.
5. Photo-micrography of vitally stained specimens before fixation is essential.

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REFERENCES


STENOSIS OF THE LOWER CANALICULUS*

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The literature on treatment of stenosis of the lower canaliculus is not very extensive and this is my excuse for recording the few cases which I have had to deal with over a period of a good many years. An impervious fibrous stricture after trauma seemed to be a particularly troublesome condition, but I have had this small series of cases in which, by utilizing the upper canaliculus, a functional success has been achieved.

The first case was that of a girl who was injured in a ski-ing accident, the point of the ski penetrating the orbit on the inner aspect. It went through the lower lid obliterating the lower punctum and about half the lower canaliculus. I saw her some months after the accident when the wound had healed with only slight deformity. After testing the passage to the nose via the upper punctum and finding it clear, I slit the upper canaliculus in its

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whole, length as far down as possible and inserted a small wool wick into the lower open end. This was removed after three days and the opening has remained patent, can be entered by the lacrimal nozzle and the passage is clear to the nose. Epiphora which was extremely disconcerting has practically ceased and she had been quite comfortable for 2½ years when I last saw her.

Four other cases have been treated in this way: one being traumatic, the patient having run into the sharp corner of a cupboard in the black-out, and three being strictures near the ampulla presumably from infection as there was no history of any injury. Of these, three were successful and one of the infected ones a failure, but in none of the three successful ones can I find the opening with a probe or dilator though fluorescein passes into the nose and there is no complaint of epiphora. As two of the successful ones have been comfortable for over 6 years, there must be a well lined though minute opening which shows no sign of closing.

A sixth case was that of a boy who was attacked by a dog and bitten or scratched over the inner aspect of the left eye and nose. There was considerable damage to the lacrimal bone and the lower canaliculus was blocked. Three years after the injury pus could be expressed from the sac via the upper punctum and a dacryocystorhinostomy was performed with some difficulty owing to bony thickening. Before suturing the nasal and lacrimal flaps together a probe was passed up into the fundus of the sac and then into the lower canaliculus where it could be seen between the lower punctum and the medial canthus bulging the lower lid. An incision was made on to the point and this was pushed through the opening which was made on the inner aspect as much as possible. The probe was then bent over and strapped to the skin of the lower lid. The excess of probe still in the sac was nipped off with wire cutters and the dacryocystorhinostomy completed. The probe was kept in for a week and then removed. A small opening was clearly visible and this was dilated every few days and the passage syringed to the nose. Three years have passed and the condition is quite satisfactory, and the opening can still be found quite easily.

After this success the other unsuccessful case was recalled for further operation. The sac was exposed and a probe passed, and the same operation performed. This has also been successful.

In conclusion it would seem to be worth while first trying to utilize the non-functioning upper canaliculus. I think that, if a fine short probe were inserted through the lower end of the slit canaliculus into the sac, bent over and kept in position for a few days, there would remain an opening which was identifiable.

I have an uneasy feeling that my successful cases in which no opening can be found will one day come back with epiphora and will need the more complicated approach to cure this disability.
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