

TREATMENT OF CHRONIC SUPPURATIVE DACRYOCYSTITIS.

Presented to the Section on Ophthalmology at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10, 1898.

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In response to an invitation from the Secretary of the Ophthalmologic Section of the AMERICAN MEDICAL ASSOCIATION, I send the following brief paper, the purpose of which is to present the method I employ for obliterating the lachrymal sac.

During the earlier years of my practice I tried medication, irrigation and large probes, but the percentage of relapses was so great that I finally discontinued endeavoring to preserve the patency and restore drainage in all cases of chronic suppurative dacryocystitis. For the benefit of those who conclude, in any given case, to obliterate the lachrymal sac, rather than to attempt any of the various plans offered for the preservation of drainage, I here offer a very simple, and at the same time a very satisfactory method of dealing with this question, which has not disappointed me in its results for several years. My procedure is as follows: Introduce a probe through the canaliculi into the lachrymal sac. Direct the point toward the skin so that the point of pressure may be discovered at the surface (Stevens' tenotomy hook serves well for this purpose). Incise the skin over the probe, and enlarge the opening upward and downward the entire length of the sac. Lay open any sinuses which may exist. Apply a saturated solution of monochloroacetic acid by means of a cotton applicator over the exposed surface of the sac and sinuses. Pack the wound with iodoform, and keep it packed until healing is complete. The iodoform remains in situ, and prevents the cutaneous wound from healing before the bottom is closed.

I have tried excision of the lachrymal sac and application of other forms of caustics, and the results in comparison have led me to prefer the monochloroacetic acid to any other agent. I have packed with gauze, and the result has not been so satisfactory.

For years I have used pulverized iodoform to pack the cavity of the globe after evisceration, and the behavior of pulverized iodoform in this cavity led me to believe that it would serve an equally good purpose in packing the lachrymal sac.

THE USE OF LARGE PROBES IN STENOSIS OF THE LACHRYMAL DUCT.

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In the presentation of this subject no reference is made to such mild cases of lachrymal stenosis as can be relieved by probing the canaliculi with small probes, followed by syringing, nor to cases dependent upon closure of the lower opening of the duct by pressure from the inferior turbinated body. The class to which I desire to call attention is that of true stenosis of the lachrymal duct, in which mild measures and nasal treatment are of no avail.

In order to pass a large probe down the lachrymal duct it is first necessary to slit a canaliculus. It is

very important that the canaliculus of lesser function should be selected. The punctum and canaliculus of the lower lid unquestionably have greater function in draining the palpebral aperture of fluid than have the corresponding parts in the upper lid. Once the canaliculus is slit and its punctum destroyed, its suction power is lost, and it ever after acts in an indifferent manner. If the lower canaliculus is slit, probes passed and the duct otherwise treated until it is thoroughly patent, this eye will never again be free from epiphora when exposed to inclement weather. On the other hand, if the upper canaliculus is chosen as the means of gaining access to the lachrymal duct, it will be found that after the passage is rendered patent the lower canaliculus will be able to keep the eye free from tears. I deem this point of great importance, and believe that the many failures in the cure of lachrymal duct stenosis are due to the destruction of the suction power of the lower canaliculus.

If probing the lachrymal duct for the relief of stenosis is to be of any advantage we must observe the same rules as in treating stricture of the urethra. The duct must be dilated *ad maximum*. It is my custom to pass, at the first sitting, the largest probe that can be introduced. The canaliculus in the upper lid is slit with a Graefe cataract knife, with the aid of a Bowman's grooved director. The director is passed through the canaliculus, then turned to the vertical and passed to the bottom of the lachrymal sac. The Graefe knife is used with the director in the vertical position. The director is now removed and a graduated probe introduced, to determine the size of the duct. If a marked stricture is encountered, an Agnew's knife is passed down the duct and the stricture cut. If no stricture is found, the Agnew knife is not used. The size of probe that the canal will admit can be fairly well judged by the passage of the graduated probe. I find that it is rarely that a No. 10 Theobald probe can not be passed. If the probe first passed is loose in the canal one after another of larger size should be tried until one is found that is passed with difficulty and completely fills the canal. Strong pressure should be exerted on the mucous membrane throughout the entire length of the canal. It is my custom to examine the nose to see that the probe is well down in the inferior meatus. If it is not, this or a smaller probe is forced down until it can be seen or felt beneath the inferior turbinated body. The probe is allowed to remain *in situ* about ten minutes. It is then withdrawn and the lachrymal passage syringed with a saturated solution of boric acid until bleeding ceases. The patient is then sent home and instructed to apply lead and opium wash on pledgets of lint which have been cooled on a block of ice. This should be done almost continuously for 24 hours. At the expiration of this time I inject, with a lachrymal syringe, into the duct a few drops of 10 per cent. solution cocaine. A probe a size smaller than the largest one passed the day before is then passed. The negative pole of a galvanic battery is then connected with the probe, the positive pole being placed in the patient's hand. Then from two to three milliampères of current is turned on for ten minutes. When the probe is removed it will be found to be very loose, owing to the electrolytic action of the cathodal current. The lachrymal passage is syringed free of blood as on the day previous. There is usually a little bleeding after the removal of the probe, for the first four or five days. The patient