

A WINDOW RESECTION OF THE NASAL DUCT IN CASES OF STENOSIS.

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(Read by invitation.)

Over a year ago Dr. R. L. Randolph referred to me a case of bony stenosis of the nasal duct of such a degree that the introduction of the smallest probe beyond a point about 5 mm. below the lacrimal sac was impossible. The patient was suffering from epiphora in a marked degree. I operated, following the so-called Killian procedure—that is, the anterior part of the inferior turbinate was removed, after which the entire nasal duct was opened up. The epiphora stopped at once, and correspondence with the patient during the past year showed that a permanent cure was obtained.

Ophthalmologists agree that this class of cases is extremely difficult to deal with, since the treatment with probes or with the stricturotome is inapplicable. The method of opening the nose from without through the lacrimal fossa, as recommended by Toti, has not, as far as I can learn, been adopted. The resulting scar and the general anesthesia would argue against it, even provided this procedure gave as good results as other methods. Extirpation of the lacrimal sac has been followed by some with success, particularly in cases with associated dacryocystitis; while others are not enthusiastic over this method of treatment. Then, too, if possible, it would seem more rational to remove the stricture, the primary cause of the trouble, than to extirpate the sac, which is only secondarily involved.

The rhinologist has given but little attention to the surgical treatment of this condition, a lack of interest explained by the fact that patients suffering from epiphora usually seek relief of the ophthalmologist. Intranasal operations for cure of stenosis of the nasal duct have, however, been described by Caldwell, Killian, and Passow. In 1893 Caldwell reported a case in which, after passing a probe into the duct as far as the stenosis, he removed with an electric trephine part of the inferior turbinate as far back as the nasal duct. The duct was then followed in an upward direction until the probe was reached and drainage was established. Six years later Killian advocated the removal of the anterior part of the inferior turbinate and the entire nasal wall of the nasolacrimal duct. In 1901 Passow reported having done a similar operation four times under general anesthesia, with good results.

All these intranasal operations involve the removal of a part of the inferior turbinate, and, considering that in all branches of surgery our aim should be toward conservatism when possible, it occurred to me that a conservative intranasal procedure—a window resection of the lacrimal duct above the inferior turbinate, leaving this structure, a physiologic organ, intact—ought to accomplish the same result as the more radical procedure of Killian and Passow. Moreover, owing to the ability to control hemorrhage by the use of adrenalin, the operator is able to do more accurate work than was formerly possible. The operation suggested is shown in Fig. 1, and consists in resecting, under local anesthesia (cocain and adrenalin), a window from the nasal duct in the upper part of the nose above the inferior turbinate, and involves the removal of part of the lacrimal bone and also a piece from the superior maxilla. (The instruments used are bevel-edged chisels.) This removes a stricture in the upper part of the duct, but leaves a stenosis in the lower part untouched. It is, however, immaterial

whether the lower part of the duct is stenosed, so long as the tears can drain through the artificial window. Previous to operation a probe is passed into the duct to act as a guide.

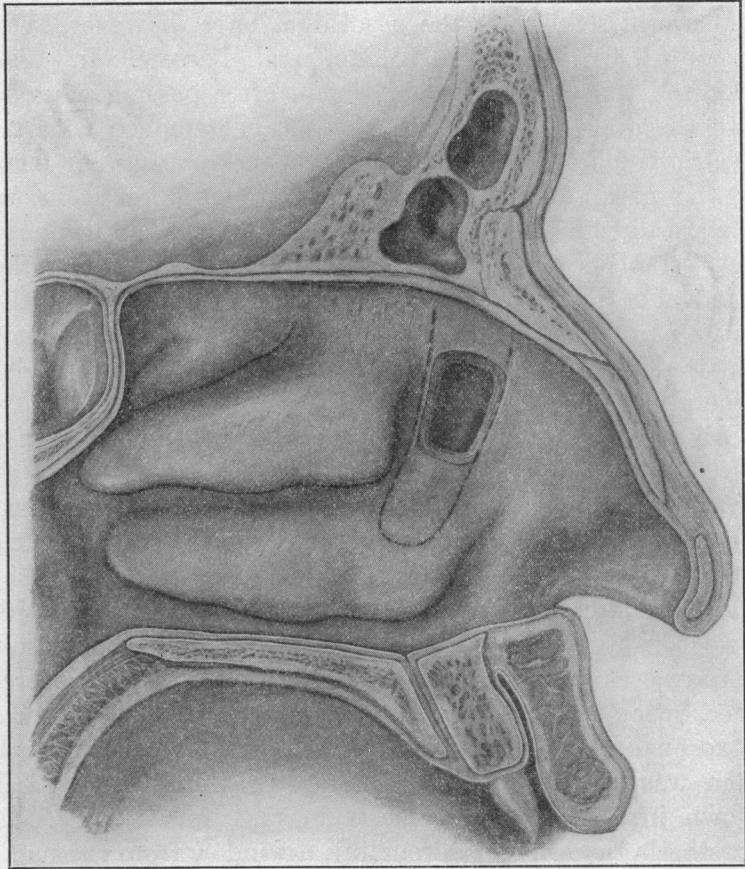


Fig. 1.—Window resection of the nasal duct.

The canaliculus may be slit or, preferably, as suggested by Dr. Randolph, a fine probe is passed through the dilated punctum. In no instance can the operation make the previous condition worse, and the result is either a complete

cure or considerable improvement. Care must be taken in operating that the antrum is not opened up.

The operation has been done in six cases, four of which were cured and two improved. Of the cured cases, two were of bony stenosis high up in the duct, and two presented apparently a condition of hypertrophy of the entire lining membrane. The two improved cases presented also a condition of thickening of the lining mucous membrane. One of the cases cured was also associated with definite dacryocystitis; another, a traumatic case, presented a lacrimal fistula of eighteen months' duration. Three of the cases which were cured I am able to demonstrate before the society. The description of the operation and the demonstration of these cases are in the nature of a preliminary report, and serve to call attention to the encouraging results which have been obtained. It is my purpose to report later with Dr. Randolph the results in a series of cases.

I am indebted to Dr. Randolph, who first interested me in this work, and whose coöperation and enthusiasm have enabled me to develop the technic of the operation.

DISCUSSION.

DR. ROBERT L. RANDOLPH, Baltimore: The case alluded to by Dr. West was that of a brakeman on the B. & O. Railroad. He had found his efficiency much impaired by a chronic dacryocystitis of several years' standing. He had received a blow on the nose from a heavy piece of iron which had crushed in the lower end of the sac and upper end of the nasal duct. A No. 4 probe could be passed, but nothing larger. It occurred to me then that through an intranasal operation would be the proper way to seek relief for such a condition, and with this in view consulted with Dr. West, of the Laryngological Department of the Johns Hopkins Hospital. Dr. West has just described what was done in this case, and in all cases of epiphora which were afterward admitted to my service in the dispensary. It would seem important to make the window big and carry it

high up, and from the few cases which have been subjected to this method of treatment, it looks promising, and particularly so in cases of traumatic dacryocystitis. The brakeman returned to work and has never had any trouble since. It is proposed in the future to simply enlarge the punctum and pass in a No. 4 or No. 5 probe without slitting the canaliculus. To effect a cure in this troublesome class of cases without destroying in a measure the function of the canaliculus, as is often done, would be a great gain. It remains to be seen whether this opening will be closed with granulation tissue.

ILLUMINATED BOX EYE-TESTING CHART.

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My reason for submitting the following report is the difficulty we all experience in refraction work, whether dependent upon solar or artificial illumination, in illuminating our test-type charts. I take it for granted that nearly all of us employ artificial illumination, whether reflected or transmitted.

Until Black's admirable transluminous test-type cabinet was practically made unobjectionable by eliminating the light spots, I had experienced the usual difficulty due to lack of uniform intensity of light, confusing reflection, etc., no matter how the cards were placed, or whether porcelain plates or paper charts, white or black, were used.

While the National Electric Lamp Company were at work on Dr. Black's chart, Dr. Hyde, head of the Department for Physical Research, called my attention to a very clever device originated by Dr. Herbert E. Ives, of his department, in conjunction with Dr. P. W. Cobb, Physiologist. The gentlemen were engaged in working out certain physiologic problems connected with vision and illumination, the need