SUMMERSKILL'S DACRYOCYSTORHINOSTOMY*

BY

R. W. B. HOLLAND

C.M.S. Hospital, Quetta, Baluchistan, W. Pakistan

THE routine excision of lacrimal sacs with obstructed drainage is bad surgical practice, and the provision of drainage through the lacrimal bone into the middle meatus of the nose has become the accepted procedure. In past years the time-consuming operation of Toti and its modifications have been accepted as the only satisfactory methods of achieving this aim. These operations, however, are tedious and troublesome, and require much experience for consistent success.

But the work of Summerskill (1952) has demonstrated clearly that excellent drainage can be achieved and maintained by the simplest of methods. His operation has certainly not received the attention it deserves, for it represents a great advance on any other previously published procedure.

We have been experimenting with this method since 1953, and have achieved almost consistently good results. Since it has presented for our busy eye-clinics so many advantages in speed, simplicity, and effectiveness, we decided to publish a small series of cases in the hope that this procedure would win far more general acceptance than it has done previously.

This report represents the experiences obtained by using Summerskill's method, slightly modified, in a series of 36 consecutive cases of naso-lacrimal obstruction operated on at our annual eye-clinics in Shikarpur and Khairpur, Pakistan, in January, February, and March, 1955.

Material

(a) *Cases with lacrimation and a muco-purulent discharge on pressing over the inner canthus.*—The duration of symptoms was several months to 2 or 3 years. The ages of the patients ranged from 2 or 3 to 50 or 60 years. Nearly half the patients were children between 3 and 4 years old, and the large majority of the patients were female. (The ages of patients here have to be assessed by guesswork since many of the poorer class have no idea of their age.) This group comprised 29 patients.

(b) *Cases with fistulae which had been discharging mucus or muco-pus for months or years.*—These were all found to have excess fibrous tissue around the sac, together with some overlying oedema due to recent inflammation. This group comprised 7 patients.

In one such case the superficial and deep tissues were red, swollen, and acutely inflamed; after a few injections of procaine penicillin 400,000 units per day, the

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redness disappeared, but the pus from the fistula and the oedema and friability of tissues remained. Nevertheless, the operation was performed owing to pressure from the patient who was poor and could not afford to stay away from his work longer. The result was perfect and healing by first intention occurred without any trouble to the patient or to the nursing staff.

Some patients presented with symptoms of mucoid discharge onto the face arising from sacs which had previously been operated on here or elsewhere by other methods. At operation some sacs were found intact and had obviously not been found at the first operation. Some had previously been operated on by the Summerskill method by beginners in our clinic. In these the polythene tubing had evidently not been accurately pushed home, and lay loosely in the hole made for it. In such cases it was found on opening the sac that the tube was lying transversely in a distended sac cavity. There was no internal fistula into the nose and the tears and the mucus were being discharged on to the face; there was no tissue reaction around the tube, but it was simply not fulfilling its purpose. All that was required in these cases was to excise the skin edges, create a fresh internal fistula into the middle meatus of the nose, insert a fresh tube so that it fitted snugly, and sew up the skin.

This group included two patients who presented cystic dilatations of the sac which were found to be recurrences due to a previous Summerskill's operation incorrectly done. The mucoid discharge drained backwards through the punctum, but no fistula was present. These were very easy to deal with. On incising the skin, a clean dilated sac filled with mucus was found, with the polythene tube lying transversely in it. The tube was removed, a new fistula was established into the nose, and a fresh tube was pushed home.

Summerskill (1949) gave reasons for abandoning intubation of the naso-lacrimal duct in favour of this simpler and more effective procedure, later more fully described by him (1952). Our method follows the later technique in all essentials, except that the opening into the nose is made by a trocar and cannula and that the only sutures we insert are those into the skin.

Operative Procedure

The nasal cavity on the appropriate side is packed with gauze impregnated with a solution of Nupercaine H.Cl. 1 per cent with adrenaline 1/1,000 in equal parts 10 minutes before operation. Under local infiltration anaesthesia combined with a block of the naso-lacrimal nerve in the medial wall of the orbit, a vertical incision is made about 3 mm. medial to the inner canthus. The skin and orbicularis muscle are retracted. Operations in children are done under intra-tracheal anaesthesia. The tissues around the sac are first infiltrated with a few mls. 1/2,000 Nupercaine-adrenaline solution in order to achieve haemostasis. (This is done after the patient is anaesthetized and some 4 or 5 minutes before the operation is begun.) The lacrimal fascia is incised and dissected off the sac which is then opened and its mucoid or muco-purulent contents swabbed out. A trocar and cannula of suitable size is passed through the lower end of the medial wall of the sac and on through the lacrimal bone into the nasal cavity in one motion. The instrument is then removed, and the polythene tube, mounted on a simple introducer, is passed through the hole so that the lip of the tube rests firmly against the medial wall

of the sac. The tube must fit snugly and the introducer should fit loosely into the tube so that it does not pull the tube out with it on withdrawal. The cause of failure in this operation has sometimes been that the introducer was fitted too tightly into the tube, so that the tube was partially withdrawn when the introducer was removed; thus, in course of time, the tube comes to lie in the cavity of the sac and the stoma closes.

The position of the tube in the sac is always verified by inspection and the patency of the fistula into the middle meatus of the nose is tested by inserting a probe through it. The sac itself is not stitched, but the skin edges are accurately sewn together with interrupted cotton sutures. A firm pad and bandage are applied.

The dressing is untouched for 48 hours and is subsequently changed on alternate days. The stitches are removed on the sixth day after operation.

Commentary

Healing of Wounds.—Over 90 per cent of the cases in this series healed by first intention. A few wounds, especially those in sacs with previous fistulae, were treated with hot fomentations three or four times a day for 4 or 5 days. With this procedure healing soon occurred. Two patients with fistulae needed between 10 and 15 days to heal, but all others cleared up within 10 days.

Speed of Operation.—In place of a long drawn-out procedure the whole operation can be completed with a speed which will astonish the operator himself. Once the simple steps in identifying and opening the sac are mastered (and this, surely, is familiar to anyone who excises sacs routinely), the insertion of the tube and the stitching of the wound can be done very quickly. As soon as the anaesthesia is established and the field prepared it has been found that the total time taken for the operation in 80 per cent of cases varies from 3 to 5 minutes. This fact alone commends itself to us in Pakistan where we have had to perform an average of over forty cataract extractions and over twenty other major ophthalmic operations daily for 2 weeks in one of our clinics in 1955.

Simplicity.—The description of the operation has only to be verified in practice to demonstrate how simple it is.

Effectiveness.—The early results were most pleasing to patient and operator alike. The symptoms were immediately relieved and the wounds healed quickly. It is too early to comment on the long-term results of the operation except to say that of more than one hundred cases of lacrimal obstruction operated on since 1953, we have seen only about a dozen patients presenting with a recurrence of symptoms, and all but one of these had been operated on by beginners. The mishaps were all caused by the displacement of the polythene tube, and all were successfully corrected by a subsequent operation.

Post-Operative Discomfort.—The patients themselves were impressed by the little discomfort they suffered. This was hardly noticeable in over

90 per cent of patients; a few who had surrounding inflammation or fibrosis before operation complained of slight pain, but even these rarely needed sedatives.

Summary

- (1) A series of 36 cases of lacrimal obstruction is presented.
- (2) All were operated on by a modification of Summerskill's method of dacryocystorhinostomy by means of a polythene tube.
- (3) Cases of simple obstruction and cases presenting fistulae, with or without overlying inflammation, were all successfully treated by this method.
- (4) It is claimed that Summerskill's operation represents a definite advance over other methods, and the procedure is recommended for all types of obstruction of the naso-lacrimal duct. A plea is made for its wider acceptance in view of its advantages of speed, simplicity, effectiveness, and absence of post-operative discomfort.

REFERENCES

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