A NEW FRONTAL SINUS OPERATION.

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THE operative treatment of frontal sinus disease has undergone many modifications in recent years. The controversy between the advocates of the so-called intranasal operation and of the external operation has not yet closed. The grave objection, to my mind, to the intranasal method is the necessity for employing the burr or rasp. No doubt, by this means, the frontonasal duct can be enlarged, but in a great number of cases a condition of chronic osteomyelitis is established, and even sometimes an acute spreading osteomyelitis develops. For this reason I have not performed the intranasal operation for many years.

The chief objections to the external operation, in the past, have been the poor cosmetic results, the considerable convalescing time, and the risk of injury to the pulley of the superior oblique muscle. The operation described by Mr W. G. Howarth in the *Journal of Laryngology and Otology* (July 1923, Vol. xxxviii., page 341) has proved, in my opinion, a useful method and an improvement upon previous technique. It is a drainage operation and Mr Howarth rightly insists on the importance of dealing with the diseased ethmoid. I myself performed a somewhat similar operation for many years, the only difference in technique being a small point, namely, that I approached the frontal sinus by removing the ascending process of the superior maxilla, thus reaching the frontal sinus from below.

I have had many excellent results from this operation, but there are several disadvantages:—(1) Occasionally a transient diplopia occurs; this happened in two of my cases and lasted for several months, causing considerable disability; both cases recovered, showing that no real surgical injury was done to the superior oblique muscle and its pulley. (2) The period of convalescence is comparatively prolonged, patients as a rule having to remain in hospital for about three weeks; this is due largely to the œdema of the orbital contents caused by the necessary retraction. (3) An occasional troublesome watering of the eye occurs, due to interference with the lacrymal apparatus.

In order to obviate these disadvantages I have, therefore,

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devised the following new technique for an external frontal sinus operation. It is a simple drainage operation, and the ethmoidal cells are completely dealt with. The orbital contents are not retracted. The operation is performed without the use of burr or rasp, in fact only simple chisels and Luc's forceps are required after the skin incision is made. The cosmetic result is excellent, an insignificant scar resulting. When I exhibited a patient at the Section of Laryngology of the Royal Society of Medicine to show the result of this operation, many of my colleagues did not notice that the operation had been performed on both sides. Finally, the period of stay in hospital is, as a rule, only one week.

The details of the operation are as follows:—The skin

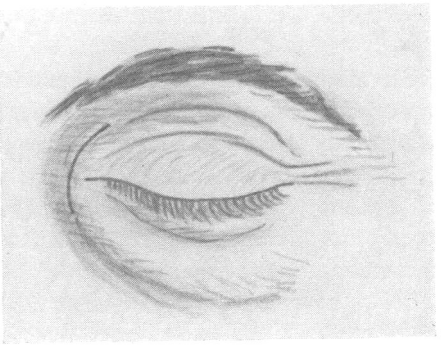
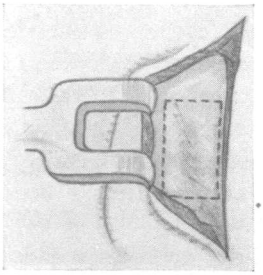


FIG. 1.

incision is made from just internal to the supra-orbital notch, forward and downward and medial to the internal canthus of the eye (Fig. 1). It is about one inch in length. The incision is then carried down to the bone, and hæmorrhage, which is sometimes troublesome here, is controlled. The periosteum is incised, and the ascending process of the superior maxilla fully exposed. The orbital contents are not retracted. With a chisel a portion of the ascending process is removed; the transverse cut below is made first, then the upper one, and they are joined by the two vertical cuts (see Fig. 2). The opening of the frontonasal duct is thus immediately exposed, and often pus is seen exuding. More bone is removed until the orifice of the sinus is thoroughly exposed, and the frontal spine is removed (Fig. 3). A portion of the interior of the frontal sinus can now be seen, and the condition of the remainder

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examined with a probe, and any polypi present removed. If the disease in the frontal sinus is found to be extensive, the skin incision can readily be extended and the sinus completely



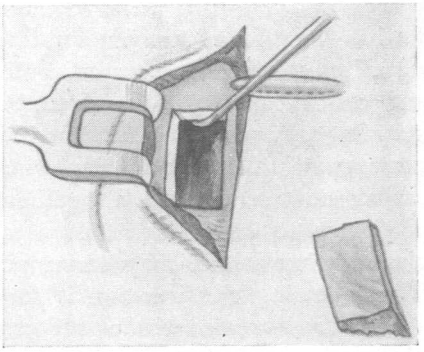
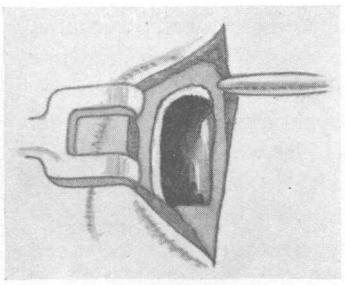


FIG. 2.

exposed at this stage. The ethmoidal region, which is easily visible, is then exenterated (Fig. 4).

The wound is carefully closed with clips or sutures. No drainage-tube is used or is necessary. After-treatment consists



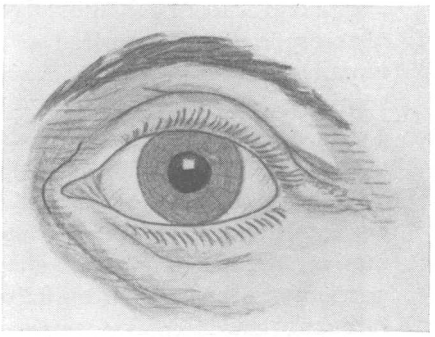


FIG. 4.

FIG. 5.

in spraying the nose with collosol iodine, and an occasional lavage with an alkaline solution may be used if necessary. The sinus is washed out on the fourth day.

I have to thank my colleague, Mr Scott Stevenson, for the drawings, which were done from my patients, illustrating this article.

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