Mackenzie's text-book on "Diseases of the Eye," one finds that he there treats of two classes of gonorrhœal ophthalmia besides the direct infection variety. One of these is described as "gonorrhœal ophthalmia from metastasis," but this is a different condition from that of which I have spoken: it is an acute conjunctivitis arising, as Mackenzie believed, in consequence of sudden cessation of the gonorrhœal discharge. It was Saint-Yves who first described it, and he recommended that bougies smeared with pus from the eye, or with pus from some one else's gonorrhœa, should be passed along the urethra of the patient! The other form is spoken of as "gonorrhœal ophthalmia without inoculation or metastasis," and appears to be merely a more chronic form of the other, if, indeed, the occurrences were not—as Mackenzie seems to hint they might have been—merely coincidences which had no true relation whatever to gonorrhœa. Desmarres seems to have seen some cases of the disease, and Ricord also.

To my mind, it is quite clear that there is a disease such as I have been describing; that it is rare, especially when one considers the frequency of gonorrhœa; and that it is a condition for which surgeons, and more especially those who are much consulted regarding cases of venereal disease, should be upon the lookout.

3. THE OPERATIVE TREATMENT OF CHRONIC SUPPURATION OF THE FRONTAL SINUS, WITH SPECIAL REFERENCE TO THE METHOD OF KILLIAN

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(*Abstract.*)

Indications for opening the sinus.—The somewhat numerous fatalities which have occurred after operation, the fact that relapses are not infrequently met with, and the possibility of considerable disfigurement attending a radical procedure are factors which must naturally cause the surgeon to weigh carefully the circumstances connected with each case before he urges operation upon his patient. Till more extended experience and improvements in our operative technic make it possible to recommend operation in every case with almost

certain knowledge of obtaining permanent cure with the smallest amount of disfigurement, we must recognise certain symptoms and local conditions which make surgical interference imperative, namely: (1) symptoms suggesting cerebral complications; (2) pain, usually of the nature of headache, which may be of a very severe and persistent type; (3) distention of one of the bony walls of the cavity, or the presence of a fistula discharging externally. If the general health of the patient is evidently affected by the continued suppuration, or if he should suffer from great mental depression and anxiety regarding his condition, a state of affairs which sometimes exists in these cases, we should not refrain from urging the operation. So far as we are able to ascertain, we cannot draw definite conclusions as to the percentage of cases of frontal sinus suppuration in which intracranial complications arise. That they do occur there is ample evidence to show, and there is the possibility that they may even occur more frequently than statistics would indicate. The more aggravated symptoms in some cases are relieved by treating the intranasal condition. If nasal polypi are thoroughly removed, along with the anterior end of the middle turbinated bone, and the anterior ethmoidal cells opened into, better drainage may be established and the outflow of secretion rendered more easy.

Operative procedure.—Notwithstanding numerous operations and their various modifications, many of which are associated with names of different surgeons, there are only two main principles involved. (1) The sinus is opened and drained into the nose, but its cavity is preserved; or, (2) the sinus is obliterated by the removal of one or more of its bony walls, so that there is no longer a cavity to deal with. The Ogston-Luc operation consists in opening the frontal sinus through its anterior wall, the size of opening being relative to the dimensions of the cavity, in careful curetting of its interior, and in establishing a large communication between the sinus and the nose, at the same time destroying the anterior ethmoidal cells in the region of the nasofrontal duct. Drainage into the nose is insured by the introduction of a strip of gauze through the nasofrontal aperture, and the operation is completed by immediate suture of the skin incision. This operation is probably used more widely than any other, yet results show that the class of cases suitable for it is small, due to anatomical causes. In

the operation for obliteration of the sinus, the method of Kuhnt is described, in which the whole of the anterior wall, and also to a greater or lesser extent the floor, is removed. Postoperative mortality considered. Disfigurement. Osteoplastic operation used by some by raising a bone flap from the anterior wall of the sinus. Killian operation described, for which the author claims the best radical treatment of the disease with a minimum disfigurement. Killian advises it in all cases even when there is no discomfort beyond slight nasal discharge. Should a more general and extended experience prove equally satisfactory, it is possible that in the Killian operation we have at last obtained a method of dealing with chronic frontal sinus suppuration in large and complicated cavities, which may be regarded as the method *par excellence*. The whole sinus, with its recesses and partitions, is thoroughly inspected, and the cavity is almost completely obliterated by the resection of its anterior and inferior bony walls. Further, by the removal of the ascending or frontal process of the superior maxilla, excellent access is obtained to the ethmoidal cells, and a large opening of communication is thus made between the frontal sinus and the nasal cavity, establishing good drainage. To reduce to a minimum the deformity which may follow so extensive a dissection, the supraorbital bony margin is preserved as a bridge between the gap formed by removal of the anterior sinus wall and the floor.

Conclusions.—No single method of procedure is applicable in all cases of chronic suppuration in the frontal sinus. When the sinus is small, and can be thoroughly inspected through an aperture made in anterior wall, and when no ethmoidal disease coexists, simple opening by the Ogston-Luc method may prove satisfactory. In every other class of cases he would recommend and practise obliteration of the sinus by removal of its anterior and inferior walls. Whatever be the exact radical procedure adopted, there is no doubt of the value of removing the ascending process of the superior maxilla in order to gain better access to the ethmoid labyrinth and nasal cavity.