

If there is a persistent discharge from the middle meatus, we must consider whether a suppuration in the anterior ethmoidal cells is not also present. To determine this accurately in urgent cases, and when the patient is not satisfied with a mere improvement in his condition, one of the following operative measures will be necessary :—1. Resection of the anterior half of the middle turbinate, and examination with a little mirror to see whether the pus proceeds only from the frontal sinus and antrum, the openings of which can be rendered more distinct by injecting coloured fluid into the sinuses, from the forehead and alveolus respectively. 2. The extensive opening of the frontal sinus from without. 3. Opening into the anterior ethmoidal cells from the orbit.

Suppurations in the accessory cavities of the nose, which are so important, not only to members of one specialty, but to practitioners in general, will be more favourably influenced in future, both as regards frequency and severity, by careful attention to the following points :—The implication of the nose in many infectious diseases, the virus of which is either taken up directly, or, when acting on another part of the body, becomes localized in the nose if a circulatory disturbance is already present here ; care of the teeth, and strict supervision of the work done by so-called dentists, which is often extremely faulty and unsubstantial ; fulfilment of the requirements of public and private hygiene, mentioned in the foregoing survey, etc., etc. There is here still much to investigate and much to discover which will be of universal benefit when placed at the service of the community—

“ For if our virtues
Did not go forth of us, 'twere all alike
As if we had them not.”

ON THE COMPLICATIONS OF EMPYEMA OF THE ACCESSORY CAVITIES OF THE NOSE.

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Communicated to the Fifth International Congress of Otology, Florence, 1895.

THE affections resulting from suppuration in the sinuses ought to be known to the practitioner. Often, indeed, they are the only conspicuous features in the picture, while the cause which gives rise to them, the sinusitis, may escape observation. Dr. Lichtwitz's studies are founded upon 149 cases of empyema of the different sinuses ; 127 of these were affected with unilateral or bilateral suppuration of the same sinus, the remaining 22 had combinations of affections of different sinuses.

1. The complications may affect neighbouring organs.

The nasal cavities properly so-called : Pseudo-ozæna, 13 times ; small polypi of the middle meatus, 12 times ; caseous coryza, 3 times ; sensation of bad smell (cacosmia) in almost a third of the cases ; *naso-pharynx* (conditions formerly designated naso-pharyngeal catarrh or Thornwaldt's disease) ; *oro-pharynx* (tonsillar abscess) ; *ears* : recent or

old-standing suppurative otitis, 15 times; sub-acute otitis, 7 times; chronic otitis, 14 times; nervous tinnitus, 9 times; vertigo, 3 times; eyes: 3 cases of dacryo-cystitis, 2 cases of exophthalmos, 2 cases of partial atrophy of the optic nerve, etc.; nervous system: hemicrania, cephalalgia, frontal or occipital, feeling of weight in the head, 51 times (frontal and sphenoidal sinusites furnish the largest contingent of this complication; tri-facial neuralgia in 4 cases of maxillary sinusitis); skin of the face: recurring erysipelas, 4 times; eczema of the orifice of the nose and on the lips, 5 times; acne rosacea, 5 times; oily seborrhœa of the forehead, once; erythema with œdema fugax, twice.

2. The complications may often affect distant organs.

Broncho-pulmonary apparatus.—In the first place there must be mentioned pseudo-phymia (pseudo-phthisis) found in seven patients in whom the diagnosis of tuberculosis had been made by very distinguished confrères. One patient affected with double latent empyema of the maxillary sinus presented all the symptoms of a pulmonary abscess, or of an inter-lobar pleurisy. In three cases an obstinate cough only ceased upon the evacuation of the affected sinuses, and in five sinusitis was accompanied by asthmatic attacks.

Affections of the digestive canal.—Dyspepsia, dilatation of the stomach, four times; obstinate diarrhœa, thrice.

Cardio-vascular disturbances.—One case of slowing of the pulse (28 to 32), which improved under nasal treatment; two cases of phlebitis of the lower extremities. The writer wonders if a case of aortic regurgitation, causing death, and the cases of albuminuria and of articular and muscular affections which he has several times observed, ought to be counted as among the complications of these chronic suppurations, or to be looked upon simply as coincidences. He is in favour of the former hypothesis, in view of the permanent absorption of septogenic materials.

3. *Modifications of the general condition.*—Weakness with emaciation, 10 times; fever, 4 times; insomnia, thrice; unconquerable diurnal somnolence, thrice; semi-cerebrasthenia, 4 times. In a boy, aged ten, affected with double sphenoidal sinusitis, there occurred such periods of loss of consciousness, analogous to the *petit mal* of epilepsy, with intense occipital headache, the symptoms disappearing simultaneously with the purulent affection of the sinus.

The treatment consisted in a regular evacuation of the pus and the prevention of its formation. In case of the maxillary sinus, the best plan was to open it widely, either through the alveoli or the canine fossa; in cases of the other sinuses it was sufficient to irrigate them regularly by their natural orifices to obtain improvement, or even a cure of the majority of these complications.

It is probable that among the complications which have here been passed in review some were merely simple coincidences, but in the great majority of the cases they must be considered as complications closely dependent on the empyema of the sinuses. The predominance of certain disturbances in this or the other subject is to be explained by individual predisposition.

Dundas Grant (Trans.).