

Ethmoid suppurations may often be treated similarly, viz., the lower wall of the cells broken away by means of hook or forceps, so as to give free passage to the pus. In more extensive cases part or all of the middle turbinal may have first to be removed, and polypi and granulations cleared out before it is possible to get at the offending cells. Even then it is not always possible to cure ethmoid suppuration.

Of the three methods of opening the antrum of Highmore the simplest is the operation through the inferior meatus; its use, however, is limited to acute and sub-acute cases. The opening through the alveolus is comparatively simple, and in the majority of cases sufficient to cure even chronic empyema (forty-one cures out of fifty-four cases, *i.e.*, seventy-six per cent.). This method is therefore much to be preferred to the more serious operation through the fossa canina.

DISCUSSION.

Dr. LUNING: The operation through the canine fossa was the oldest surgical method of treating empyema of the antrum. Dr. L. had not experienced any of the disadvantages urged against it by specialists. Food, etc., did not enter the antrum through the hole. He always made the opening large enough to admit the point of the little finger, and so had often discovered sequestra, etc., which had maintained the suppuration.

Dr. HEGETSCHWEILER considered syphilis one of the causes of accessory cavity suppurations. Such cases required general treatment.

Dr. RITZMANN drew attention to Kuhnt's treatment of frontal empyema, *i.e.*, opening from without, and complete removal of the whole mucous membrane.

Dr. LAUBI, replying to Lüning, said that he gave the preference to opening the antrum from the alveolar process, but by no means rejected the operation through the canine fossa. The latter was required in many cases, and the opening ought to be large, because obturators were very uncomfortable. But he objected to subjecting every patient to so severe an operation when seventy-five per cent. could be cured by the much simpler alveolar opening. In reply to Dr. Ritzmann, he said that he knew Prof. Kuhnt's work well, but that in treating frontal empyema there were two different objects in view: first, to prevent the retention of pus; second, to stop the formation of pus. In many cases the former was all that need be attempted, as thereby all the patient's troubles were removed, and this could often be accomplished by endonasal treatment.

Arthur J. Hutchison (Trans.).

Editorial.

REMARKS ON TUNING-FORK TESTS.

DR. HARRIS (Brooklyn) has in a recent number of the "Archives of Otology" (Vol. XXVI., No. 1) published the results of the laborious in-

vestigation of over sixteen hundred cases with Hartmann's series of five tuning-forks for air and bone conduction. In an abstract (p. 405 of the last number of the *JOURNAL OF LARYNGOLOGY*) we gave a summary of his conclusions, which embody many points of practical value; and a few comments on these may not be out of place, even if they add very little to what Dr. Harris has stated, and are in the main confirmatory of his opinions.

The occurrence of diminution of "bone conduction" for the higher tones in acute affections of the sound-conducting apparatus, including furuncle of the external meatus, must have been noticed by all careful observers. Dr. Harris attributes it to a secondary or simultaneous affection of the internal ear. This is, no doubt, the true interpretation in a large number of cases as far as our clinical judgment is to be trusted. At the same time the present writer has always been impressed with the possibility of an easily understood fallacy, namely, difficulty in excluding the influence of air conduction when using high-pitched tuning-forks for bone conduction in case of a normal ear. This makes the audibility by bone conduction appear much longer than it really is, and the standard thus obtained as the normal is much too high. With such a standard we may find an apparent diminution of bone conduction to a greater extent than really exists in cases where there is simply an impediment to air conduction. We should therefore attach little importance to the results of tests with high-pitched forks by bone conduction.

Rinné's experiment is, according to Dr. Harris, of doubtful value in diseases of the middle ear except in cases of excessively poor hearing. This is true of Rinné's test in the strict sense, but if we take the difference between air and bone conduction and accept a well-marked shortening of the positive Rinné as evidence of a disturbance of this, we have a test of some value as an indication of disease of the middle ear, even when the hearing is not excessively poor. We must use Rinné's test with judgment and not expect too much from it, remembering the fallacies which surround it. In particular, in unilateral deafness a negative Rinné does not of itself indicate an affection of the conducting apparatus, unless at the same time Weber's test is positive, the tuning-fork on the vertex being heard best in the affected ear. We may almost go to the length of saying that in cases of unilateral deafness Rinné's test may be omitted. Again, the presence of increased fatiguability of the auditory nerve may produce an apparently positive or negative Rinné according as the fork is first placed on the mastoid or opposite the meatus.

A large number of cases give somewhat anomalous results, which we have been accustomed to explain, in agreement with Dr. Harris, by simultaneous involvement of the middle and internal ear. Pathology demonstrates this occurrence, analogy would suggest the possibility, and the results of tuning-fork tests can in many cases be explained by this and by no other assumption.

On the whole this series of observations ranks worthily as a solid addition to the semeiology of diseases of the ear. In regard to tuning-fork tests in general, for air conduction we may depend chiefly on a low fork (C—128) and a high one (C⁴—2048); but for bone conduction by

Schwabach's, Rinne's, and Weber's tests, a medium one (C¹-256 to C²-512). If we pick out from Dr. Harris's observations those only which were made with these forks, we find that they tally extremely well with those we are accustomed to obtain and to record. The addition of the deeper toned forks (C, C₁, C₂) for air conduction enables us to obtain very valuable and almost indispensable information in many doubtful cases.

Dundas Grant.

JUBILEE HONOURS.

It is exceedingly gratifying to see the names of several of our leading physicians and surgeons in the list of Jubilee Honours, and the official intimation of the knighthood conferred upon FELIX SEMON, Esq., M.D., is of special interest to laryngologists. His work is so well known to all engaged in this special department, that it is quite unnecessary in our journal to refer to his career in detail. It is sufficient to say that his labours in clinical and pathological research, as well as literature, have received deserved recognition in the scientific world, and he has already received many state and professional honours both here and on the Continent.

While congratulating Sir FELIX SEMON, as we heartily do, on this latest recognition of his work, we would add the conferring of such an honour upon him may also be considered an appropriate recognition of a branch of medical science which has had its origin and attained its present important position during Her Majesty's reign.

ABSTRACTS.

DIPHTHERIA, &C.

Brown, Dillon (New York).—*Antitoxin in the Treatment of Laryngeal Diphtheria: an Analysis of 991 Cases of Laryngeal Diphtheria under Personal Observation.* "Med. Fortnightly," May 15, 1897.

Dr. DILLON gives a tabular list of his cases, with notes.

		INTUBATION CASES.		
		Number.		Recovered.
July,	1885, to Sept., 1886,	37	.....	7 or 18·9 per cent.
Sept.,	1886, ,, 1887,	65	.....	15 or 23·0 ,,
,,	1887, ,, 1888,	89	.....	28 or 31·4 ,,
,,	1888, ,, 1889,	95	.....	31 or 32·6 ,,
,,	1889, ,, 1890,	63	.....	19 or 30·1 ,,
,,	1890, ,, 1891,	63	23 or 36·5 ,, Began here with
,,	1891, ,, 1892,	117	40 or 34·1 ,, calomel sublima-
,,	1892, ,, 1893,	84	32 or 38·0 ,, tions.

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