VOL. XVIII. No. 4. APRIL, 1903.

THE

JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOLOGY.

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TUBERCULOSIS OF THE MIDDLE EAR AND TEMPORAL BONE.

THE Council of the Otological Society has done wisely in devoting a meeting to a discussion on tuberculous disease of the middle ear and its annexa. The opening papers and the discussion which followed will be found fully reported in the March and current numbers of this journal, and to these we would refer our readers.

The seriousness of the disease is obvious to all. Dr. Milligan reports a mortality of 40 per cent. among the cases observed by him. The frequency of the affection is, according to the writers of these papers, greater than is generally supposed. Dr. Wyatt Wingrave has found tubercle bacilli in the discharges in 17 out of 100 selected cases of middle-ear suppuration, and "pseudo-tubercle bacilli" in 7. In 4 out of these 7 there was a family history of tuberculosis. The clinical diagnosis is often evident enough, and Drs. Jobson Horne and Milligan indicated the main features in the average case—namely, the occurrence of a discharge without pain, the extensive destruction of bone, a high degree of deafness, the presence of multiple perforations, or of a loss of substance in the membrane of such a shape as would be produced by the confluence of several perforations, the detection of tubercle bacilli, the early facial paralysis, and infection of the neighbouring lymphatic glands. In a few cases, however, an absolute proof of the *ante-mortem* diagnosis is most difficult to obtain, and a verdict has to be arrived at on more or less circumstantial evidence.

Dr. Jobson Horne narrates a case to show that although the results of bacteriological examination and animal inoculation of material obtained *post-mortem* from the middle ear and its annexa may be entirely negative, the tubercle bacilli may, nevertheless, be found in the peripheral soft parts superficial to the area of necrosis. This is an argument both against excluding tubercle from our diagnosis when these tests are negative, and also against omitting to make the fullest use of them. Dr. Wingrave's description of the methods of collecting material and staining for bacilli as practised by him in these investigations will be read with interest. He enumerates the various "acid-fast" bacilli which may be mistaken for those of tubercle, and points out the possibility of being misled by the presence of broken-up, cornified, epithelial "squames."

Dr. Horne offers an ingenious explanation of the characteristic absence of pain—namely, an anæsthetic effect produced by the products of the dissolution of the organisms. To the waxy, and not to the fatty, material he considers the tubercle bacillus owes its peculiar "acid-fast" properties. Professor Pritchard explains the absence of pain by the absence of pressure on the nerves, owing, we presume, to the rapid breaking down of the tympanic membrane and consequent relief of possible tension.

Dr. Dundas Grant pointed out that many cases of suppuration without pain were not tuberculous, but were to be explained, as he believed, by the former existence of forgotten otitis, which had left a perforation or a thin cicatrix, of the existence of which the patient was unaware.

The writers of these papers remind us that a suppuration of the middle ear in a phthisical person is not necessarily tuberculous.

Many other points of interest emerged in the course of the communications and in the subsequent discussion. We may note Dr. Milligan's insistence on the examination of the naso-pharynx and the removal of hyperplastic adenoid tissue for bacteriological examination as well as for remedial purposes.

The danger of injudicious operation in unsuitable subjects from the points of view both of shock and of risks of general infection was dwelt upon by Dr. Horne and Dr. Milligan. Mr. Ballance urged the consideration of the matter from the general surgical aspect, and recalled cases in which pulmonary phthisis had been mitigated by amputation through the femur on account of tuberculous disease of the knee-joint. He did not, therefore, consider the presence of tuberculosis of the lung as contra-indicating radical operation for tuberculous disease of the temporal bone. No doubt

he would be unwilling to push this doctrine to its extreme in all cases, and he spoke favourably of operating by stages, as was recommended under certain circumstances by Dr. Milligan and Dr. Horne. Mr. Ballance further narrated instructive cases in which the recurrence of tuberculous disease in the glands of the neck and axilla was only checked by radical operation for the removal of the tuberculous focus in the temporal bone.

Dr. Grant recalled Professor Politzer's generalization with regard to operation in chronic suppuration of the middle ear in relation to pulmonary phthisis, to the effect that when phthisis developed in the course of chronic suppuration of the middle ear the radical mastoid operation should be performed, whereas, on the other hand, when the middle-ear suppuration developed in a person who was the subject of advanced phthisis the operation was contra-indicated. The question, which is of surpassing importance, is consequently open to discussion.

Mr. Hugh Jones brought before the Society Mr. Nathan Raw's observation that tuberculosis of bone in mankind might be in many cases bovine rather than human. This would open up exceptional possibilities with regard to the primary tuberculosis which all were agreed was found with comparative frequency in the temporal bones of infants and young children. Their feeding with cow's milk might thus have a more than accidental relation to their liability to this affection. Mr. Whitehead's statistics of 100 fatal cases of middle-ear disease gave 12 as tuberculous. Of these the large majority, nine in number, were under two years of age, general miliary tuberculosis being the ultimate cause of death in six and meningitis of tubercular nature in two.

We must draw attention to the interesting clinical and pathological paper on tuberculosis of the middle ear, chiefly primary, by our American *confrère* Dr. Goldstein. His records illustrate the tendency for the disease to invade the labyrinth, a point insisted on by the observers we have above quoted.

We are confident these valuable communications will appeal to our readers, and that they will read with interest the continuation of the discussion at the last meeting of the Otological Society.

D. G.