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## OTOLOGICAL REMARKS.

BY DR. DUNDAS GRANT, M.D., F.R.C.S.

AMONG the most interesting of the otological writings issued during the past year is the "collective study" contributed by Mr. Arthur Cheatle to the columns of the *Practitioner*, on the subject of "Operative Interference on the Drum and Ossicles in Chronic Middle-Ear Suppuration." With the object of eliciting the views of the various authorities in otology with regard to the scope and advisability of carrying out the operations referred to, Mr. Cheatle sent a set of questions to most of those whose opinion could be of value. He received replies from a large number, though some, owing to *laissez-faire* or a consciousness of difficulty in replying with definiteness where definiteness could hardly be attained, seem to have reserved their judgment. Naturally a general consensus was hardly to be expected, but Mr. Cheatle, in the "conclusions" derived from a consideration of the views expressed, arrives at a very reasonable average representation of them, and gives what must be fairly admitted to be the best "appreciation" of intratympanic operations at our disposal. He groups the operations according as they are undertaken to remove the cause of the discharge or to improve the hearing after the discharge has ceased.

For the removal of the cause of the discharge, operation is chiefly called for when this issues from a perforation in Shrapnell's membrane or one in the postero-superior quadrant of the drum, and does not subside under non-operative treatment. Persistence of attic suppuration is attributed to a variety of causes, "the chief being caries of the head of the malleus, body of the incus, or both;

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caries of some part of the attic walls; collections of cholesteatoma, inspissated pus, or granulation tissue." Mr. Cheatle speaks very highly of the removal of the outer wall of the attic—that ideal operation which is sometimes spontaneously brought about by the action of the disease itself. The removal of the ossicles and remains of the membrane finds favour with most of the otologists whose opinion was asked, when the ossicles, on account of carious disease, or because they obstruct the outflow of pus and detritus, are instrumental in fostering the continuance of the discharge.

As regards the deafness resulting from exhausted suppurative inflammation of the middle ear, it is usually due to solution of ossicular continuity, adhesions, flaccid cicatrices, or retained epithelial deposits, etc., behind the drum. Various slight procedures, such as the severance of adhesions, and others which we need not specify, having been tried and found wanting, the removal of the ossicles and remnant of the membrane is generally approved of with certain reservations. According to the results of the inquiry, "operative interference is contra-indicated if the bone-conduction is not good, and, further, if only one ear is deaf, unless, indeed, the patient's occupation or pleasure demands bilateral hearing." On these points we shall make a few comments below. The great question, in any case, is whether the drum and ossicles have lost their conducting power, and to decide this Mr. Cheatle recommends stroking the drum very gently with a fine probe or camel's hair brush. If the function is abolished, the patient will feel but not hear it, or the noise produced will be very much less than it should be.

Sir William Dalby's replies to Mr. Cheatle's queries differ from those accorded by the majority of otologists, both British and foreign. He expresses himself as follows: That "the removal of the ossicles becomes merely a detail in some of the necessarily grave operations for specially grave cases; that their removal cannot, I think, usefully be discussed apart from those operations which occasionally are required to save life." This would seem to indicate that Sir William did not recognise these operations as of any value, except as incidents in (as we presume him to mean) the radical mastoid operation. This is surely a very limited view of the matter, leaving out of account, as it does, the twofold advantages aimed at and attained in many cases. The first of these is the cessation of discharge, and with it frequently of the disease, which is likely to lead to grave conditions and the call for the necessarily grave operations. The second is the improvement in hearing which ossiculectomy is often capable of bringing about without any necessarily grave operation whatever, always assuming that a

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reasonable amount of dexterity is at the operator's disposal. We trust that, as our leading English otologist, he will not without powerful cause use his great influence to discourage his junior *confrères* from practising the operations which are most comparable to the triumphs of the ophthalmologist, and which, as Mr. Cheatle's replies show, are now very generally allowed to be most important advances in our specialty.

Without wishing to advocate the reckless performance of ossiculectomy in all sorts of cases, we venture to suggest that the contra-indications laid down as the result of Mr. Cheatle's inquiry, though as a rule prohibitive, are not of absolutely universal application. First, as regards the co-existence of diminished bone-conduction, we hold that even in presence of this sign the operation need not necessarily be withheld. Let us suppose a case in which a patient has only 10 per cent. of hearing-power, and has therefore lost 90 per cent., of which 30 per cent. is due to a defect in the auditory nerve, 30 to loss of the normal conducting-power of the tympanic ossicles, and 30 (not an excessive amount) to the obstacle offered by the fixed and useless ossicles. By removing the latter we restore 30 per cent., leaving the patient with 40 instead of 10. Even if the nerve is a poor one, perhaps all the more because it is such, no effort should be spared to make the conducting apparatus as useful to it as possible. In point of fact, we have put this to the test, and in one case at least effected a degree of improvement which enabled a teacher in one of our large Universities to carry on the catechetical instruction of his class, which he was on the point of resigning. Under non-operative treatment his case appeared hopeless, but the removal of the ossicles, and subsequent application of the artificial drum, enabled him to continue his profession in spite of diminished bone-conduction.

In the next place, as to the withholding of operation when the opposite ear is normal, the rule is a good one; but with increased experience and improved technique we venture to think it will admit of more frequent infringement than is at present allowable. It will be generally conceded that in some way or other a diseased ear often exercises an injurious influence on the opposite one, inducing a form of "sympathetic nerve-deafness," and there are many instances in which operation on the diseased ear has led to an improvement in the hearing of the opposite one after this sympathetic nerve-deafness has set in. As long as the opposite ear is normal, operation may be postponed, but as soon as it shows signs of diminished functional capacity the propriety of operating on the previously diseased one calls for urgent consideration.

A counter-indication to which Mr. Cheatle draws less attention

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is one on which Professor Politzer lays considerable stress, namely, that ossiculectomy should not be performed for the improvement of the hearing-power in an ear by which whispered speech can be heard at the distance of about 1 metre. Such a degree of hearing may be generally accepted as indicating that the tympanic apparatus, as it stands, is still of some functional value, and the chances of improvement beyond this degree doubtful. No doubt this rule is one which common-sense would dictate, but common-sense is occasionally outstripped by operative zeal.

We have personally practised this operation only in cases where the indications were specially well pronounced, and even in those in which the technique was imperfect (these occur with every operator, and not alone in the earliest efforts) the result, as regards discharge, headache, or hearing was almost invariably satisfactory. We are quite ready to admit that with a freer adoption of the operation and a less fastidious care in the selection of cases a percentage of negative results would be inevitable. On the other hand, we are certain that our hesitation in removing the ossicles has—especially in the post-suppurative cases—left many without the benefit they might otherwise have received.

While strongly convinced, for the present at least, that little is to be expected from intratympanic operative interference in the typical chronic dry catarrh of the sclerotic form, we feel that the prospects are totally different in the post-suppurative conditions, especially if the internal ear is fairly intact, as indicated by the preservation of the bone-conduction. Holding this opinion, we go the length of saying that the aurist who omits to practise this method of treatment is much on a par with the oculist who abjures the extraction of cataract.

In this particular branch of aural surgery, we in this country have been behindhand as compared with our *confrères* on the Continent and in America. This may be due to our national conservatism, or to the influence of our respected *magistri*. In any case, it is to be hoped that greater attention will be directed to it, and that valuable results will be recorded at the International Congress of Otology which meets in London in the August of the present year. Mr. Cheatle deserves the greatest credit for his labour in bringing the question so vividly before the profession, and the writer of the present remarks looks forward to witnessing the fulfilment of the prophecy he ventured to utter in a lecture on the Treatment of Deafness arising from the Residua of Suppurative Inflammation of the Middle Ear, that the operative treatment of these conditions would be "a happy hunting-ground" for the progressive otologist.

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