SOCIETIES' PROCEEDINGS

ROYAL SOCIETY OF MEDICINE—SECTION OF OTOLOGY

President: E. G. COLLINS, F.R.C.S.(Ed.)

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Discussion on Chronic Adhesive Otitis Media

THE opening papers by Mr. MacNaughtan, Mr. Cawthorne, Mr. Hallpike and Mr. Spencer Harrison are on pp. 549-567.

Discussion

MR. S. MAWSON (London) said he was only going to talk about one case, which he realized did not as a rule constitute an adequate basis for a contribution, but stimulated by the technique of Rosen and encouraged by experience gained with tympanoplasty operations, he had recently operated on a case of Adhesive Otitis Media in which the diagnosis was made on the ground which Mr. Cawthorne had given. There was a history of trouble in childhood in a woman of about 35 and a fixed, intact tympanic membrane. He felt the result of surgery in this case might possibly point the way to a fruitful line of treatment. By doing a Rosen approach it was quite easy to confirm that the ossicular chain was absolutely rigid and that there were adhesions passing from the ossicular chain to the medial wall of the middle ear. The adhesions were divided and eventually the malleus and incus were mobilized, but in doing so the incus became dislocated from the stapes. As the patient was already exceedingly deaf he was not unduly concerned as the hearing in her other ear was very good indeed. He had, therefore, just put the incus back on to the stapes, hoping it would form a pseudo-arthrosis. After two weeks he was gratified to find it had healed by first intention and she had gained about 20 decibels hearing throughout the speech frequencies. It seemed that here was a possible line of treatment and that exploration was worthwhile in so far as this case showed it could be achieved, at least without a worsening of the condition when this might have been expected.

MR. I. SIMSON HALL: I have been extremely interested in the papers we have listened to this morning and have realized that as far as this particular trouble is concerned I have been completely at cross purposes with the openers. I was prepared to contradict their statement that there was no improvement after fenestration because my conception of the chronic adhesive condition was that it was a very suitable case for fenestration operation. I find, however, that we are talking of two different conditions and I think, therefore, that we ought

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to be careful in our nomenclature, otherwise confusion may be even worse confounded. I notice that Mr. Terence Cawthorne used the terms chronic adhesive process and chronic adhesive otitis as synonyms. I have always assumed by chronic adhesive process that particular form of change in the middle ear which has been spoken of in the past as a dry catarrh and was originally assumed by Dr. J. S. Fraser and Professor Politzer and others to be due to some form of ascending condition in the eustachian tube. This condition is usually bilateral, there is rarely any history of middle-ear disease, and is characterized by all the symptoms of middle-ear disease with some indrawing of the drum membrane and some loss of mobility. There are no scars, chalk patches, or other signs of old disease. On opening the ear one finds threads of tissue involving the ossicles and various folds, and obscuring all the landmarks of the middle ear, but the adhesions are not solid and I have come to regard this condition in all probability as remnants of the embryonic tissue which fills the middle ear prior to birth and which has not undergone complete resolution, and I have, therefore, concluded that the reason why deafness occurs in these cases is that they are associated to some degree with otosclerosis, and that basically it is the otosclerosis which draws attention to the presence of deafness. On the other hand, the condition which has been described in the opening paper as chronic adhesive otitis I usually call the results of chronic otitis media, the results of otitis media, or healed otitis media, or cicatricial results of otitis media, and in this condition I entirely agree with the openers that fenestration is rarely of any value. But I think there is no doubt that we have here two conditions and it is important that the distinction should be drawn between them, as the treatment for one is almost certainly contra-indicated in the other.

Mr. I. B. Thorburn said he was very pleased that Mr. Cawthorne had emphasized the most important point of all in relation to the hearing result in treatment of a severe middle-ear deafness, namely the attention which one should pay ultimately to the oval and round windows. Mr. Cawthorne had referred to the importance of examining the round window niche, but none of the speakers had referred to the even greater importance and usefulness of examining what he would like to call the oval-round window reflex in assessing the potentialities for conduction of sound to the labyrinth. This was one of the major advantages to be gained from the use of a good microscope in the surgery of the ear. It was now his own routine, not so much for fenestrations as for modified radical mastoids and tympanoplasties to expose very carefully the round window niche. One could usually see the round window membrane and note the transmission of an impulse from the stapes to it—or the absence of that impulse if the stapes was ankylosed. If one could not actually see the membrane itself, it was quite simple as Wullstein had indicated, to see the impulse transmitted through a drop of fluid placed over the round window niche. In this way one can test and accurately assess the mobility of the stapes or of the whole ossicular chain. This was a most useful manœuvre to develop and would undoubtedly have its place in the surgical management of chronic adhesive process. In his view a fenestration operation will not improve hearing in these cases and should not be undertaken unless one can demonstrate that the oval-round window reflex is absent, due to fixation of the stapes.

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MR. C. A. HUTCHINSON (Salisbury) said he was very glad to hear Mr. Simson Hall criticizing the nomenclature of chronic adhesive process being employed for the type of case described. He happened to have had referred to him quite a number of cases of chronic adhesive process which he had followed up and they had been identical with the ones which Mr. Hall had quoted and—as he had quite rightly stated—such cases were amenable to fenestration and indeed in a reasonable proportion they actually seemed to give better results than Otosclerosis.

There seemed to be three essentials if one is to have successful outcome to operation: firstly, any pharyngeal, nasal or nasopharyngeal infection should be dealt with first; secondly, at fenestration extreme care should be taken to properly reconstitute the middle-ear cleft; and thirdly, it is absolutely essential that the round window should not be obstructed. If these provisos were rigidly observed in the case of chronic adhesive process as described by Dr. Fraser then one has an excellent method of treatment by fenestration.

MR. H. V. FORSTER said he would join Mr. Martin in thinking of the possible late effects of exudative otitis media though he had met but one case in which it was necessary to drag out from the tympanum a collection of mucus which had become inspissated.

What will be the late effects of acute otitis media in infants? Mr. MacNaughtan may remember that the late Mr. Ritchie Roger from long experience had found these attacks almost always bilateral in babies.

What part does heredity play in middle-ear disease? He, Mr. Forster, speaking in a Presidential address before this section, had expressed conviction, and now remained convinced, about the marked hereditary tendency to both acute and chronic otitis media. Did members think because of its lower situation that the round window would more readily suffer post inflammatory rigidity? The late Sir William Milligan had asked a like question many years ago. Should we repeat the question when the fenestration operation was thought suitable for a case of chronic adhesive otitis media?

PROFESSOR F. C. ORMEROD said Mr. Forster had mentioned a paper read by Sir William Milligan on the subject under discussion 36 years ago, and he had been puzzled, as the speakers that morning had been, as to its etiology, but he had stated then that, whatever the cause, fibrous tissue was responsible for the patient not hearing and he had suggested that application of the new therapeutic medium of radium was a possible method of treating it, and later, fibrolysin was given in an attempt to dissolve fibrous tissue from the middle ear. Neither of these methods had given any results.

The last few years had seen a great increase in the operative dexterity and ability to explore the middle ear. The fenestration operation having been perfected by Lempert and others, it was felt that a great deal had been done for otosclerotic patients, but not for deafness due to suppuration or catarrh. The work of Moritz, Zöllner and Wullstein had opened up a new phase in the treatment of those suffering from suppurative disease and their method suggested the possibility of relieving the catarrhal ones. Rosen had developed the meatal approach to the middle ear for mobilization of the stapes and Meurman in Helsinki used an approach from above rather than from below and was able to

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mobilize the stapes and remove adhesions. It should now be possible with antibiotics and higher magnification, to open the middle ear, to remove adhesions and to carry out plastic operations on the drumhead and ossicles.

The previous week-end Dr. Barbe of Bordeaux had been in London and had given some very interesting demonstrations on the effects of ultrasonic vibrations on living tissue, and one of their outstanding properties was that they dissolved fibrous tissue. He had applied ultrasonic vibrations to cases of adhesive catarrh of the middle ear with considerable improvement in hearing in about 30 to 40 per cent. and so it seems that there are now opportunities of doing more for one type of deafness, the treatment of which has so far been most unsatisfactory.

THE PRESIDENT said that when he chose this subject he hoped his own ideas would be clarified by the discussion. There were three points about which he sought enlightenment. The first point was whether there was such an entity as chronic adhesive process. It would appear that undoubtedly there was, and he was inclined to believe it corresponded more to the condition which Mr. Simson Hall had mentioned and should be distinguished from chronic adhesive otitis. The second point was whether one could always distinguish these cases clinically from otosclerosis. Here his own opinion was that the answer was "No". Thirdly, was there any medical treatment likely to improve this condition. Again, his personal opinion was that the answer was "No" although it may be that with the increased knowledge about ultrasonic therapy which Professor Ormerod had mentioned he might change this view.

Furthermore, what was the correct surgical approach, if such an approach was desirable. The previous month, he had spent a week at Professor Wullstein's clinic where otosclerosis and chronic adhesive otitis were all grouped together in an operative series. Professor Wullstein's principle was that the otologist should not interfere with the middle ear in any way until he knew the pathology that was present. Consequently, after opening the mastoid antrum, Professor Wullstein made an inspection window between the annulus and the facial nerve to visualize the function of the ossicular chain, the stapes and, if necessary, the condition of the round window. One other point which has received very little discussion was the state of the mucous membrane of the middle ear. If there was scarring of the mucous membrane of the middle ear some of it might be removed and a mucous membrane graft applied from the lip, but if this scarring was really extensive, would it be possible to get a satisfactory functional result? This appeared to the speaker to be an important point since lubrication of the middle ear was essential. It was of interest that Professor Wullstein made his inspection window even in cases of otosclerosis. The reason behind this was that once again Professor Wullstein wished to verify the pathology of the condition present before he started on fenestration, even though he admitted that in 90 per cent. of cases the diagnosis could be in little doubt. Professor Wullstein considered, however, that a possible doubt in the odd 10 per cent. of cases justified this procedure.

MR. MACNAUGHTAN, in reply, thanked Members for their cordial reception of his Paper. He knew very little at first hand about the subject, but he believed that one of the ways of learning was to prepare a paper on it, and he had learned a great deal from the discussion.

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He had been very interested in Mr. Simson Hall's differentiation between adhesive processes and chronic adhesive otitis media. He believed he had said in his Paper that the latter was a sequel of an infection of the middle ear, and he was perfectly willing to believe that there were certain cases where there had been failure of the tubes to drain in early infancy. In these there might be no relation to infection. The others that were being considered were probably the sequelae of low-grade middle-ear infection, in which one could include secretory otitis media. It was very interesting to hear suggestions about the surgery of adhesive otitis media because in 1903 all those manœuvres had been tried and abandoned, but with the advent of chemotherapy and micro-surgery it would be possible to see how the modern techniques compared and whether an improvement could be achieved.

He was very interested indeed to hear that Professor Ojala was present, and it was certainly a great pleasure to welcome him to the meeting. Professor Ormerod had spoken of ultrasonics possibly having a future in breaking down the adhesive tissues and, as he believed they were all agreed that plastic surgery was ruled out where there was a solid mass of adhesions in the middle ear, any hopeful form of treatment would be worth a trial.

MR. CAWTHORNE, in reply, said he was most interested to hear from Mr. Spenser Harrison about the interesting case at Queens Square. He believed the newer forms of approach to the middle ear were going to be very useful, for two reasons, and perhaps the most important reason was the one mentioned by Mr. Thorburn, namely that one should get a good view of the round window. When making the conventional approach in the fenestration operation it was only in about a quarter of the cases that one could get a glimpse of the round window itself, though the round window niche was easily seen. He made a point of examining this again under the microscope at every operation for deafness.

Mr. Simson Hall had mentioned nomenclature: the subject was Chronic Adhesive Otitis and he apologized if from time to time he had said "Process", because he had not intended to use that word at all as in his view the use of the word "Process" also included otosclerosis. He had in fact intended to refer to adhesive otitis.

With regard to the embryonic bands, many people had observed that although they might be present they did not necessarily cause impairment of hearing. He had seen them quite often in the course of a fenestration operation, but he did not think that they contributed in any way to the deafness.

He had to confess he was a little disappointed that no one else had mentioned anything about incidence because he personally found it a very rare condition and he would like to have heard whether others shared his experience. For the last three years now in every case in his clinic they had looked at the tympanum for some time under magnification before proceeding to do a fenestration. Now that there was a possibility of the newer approaches being employed they would probably be used more often than a formal fenestration, although he doubted whether surgeons would find those newer approaches any easier than the fenestration.

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