

NEW YORK OTOLOGICAL SOCIETY.

Meeting of November, 1917.

Radiographs in Acute and Subacute Mastoiditis.

DR. HARRIS said he wanted to refer to the ever recurring question of the diagnosis, or rather the treatment of acute mastoiditis. It was a question they were always discussing, and he had recently read a paper by Dr. Dench on the indications for it. The speaker said he had seen recently two or more cases, where the old textbook definitions were entirely lacking. He did not think that in this gathering any of them would fall down on these cases, but there was still a pretty widespread idea that the classical symptoms must be present, namely, the pain referred to the mastoid, usually subjective, pain at least, if not subjective obtained by pressure, and sagging of the superior posterior wall.

Dr. Harris said the reason of this discussion was especially in reference to what experience the members of the society had had in the use of X-ray pictures. His first case was a man who had gone three weeks with an acute ear and who had had repeated paracenteses (he thought this had been performed three times). There was no pain, no sagging of the superior posterior wall, no symptoms whatever, except a continued suppuration, which was not excessive. The man was very decidedly deaf in one ear, however. The X-ray picture showed almost complete obliteration of the mastoid cells and the operation confirmed everything the picture had shown.

The second case had lasted almost the same time, possibly a few days longer. The day before Dr. Harris saw the man he had a little pain, but up to that time no pain whatever. Neither of the cases had had a blood count examination, and the second case had no preliminary examination until the discharge in the ear. The second case showed the same complete destruction, the same involvement, all that with pus and granulations the first case had.

Dr. Harris said that ten or fifteen years ago he would have been rather puzzled with these cases in making a decision

to operate. He should have felt certain that he would not have been warranted in doing so without consultation. He said he was interested in whether any of the gentlemen were making use, in a routine way, of X-ray pictures, whether they were having a roentgenogram of every one of their cases or only in cases where they were in doubt, as in the cases he had narrated, and how much value the pictures were giving them today.

Dr. Harris said his cases showed absolutely nothing at all. The ear would not stop discharging, or stopped and then went on. The one man had been seen by one of the best New York men, who did the paracenteses. The second man had had no blood examination, neither any temperature, but he was operated on the same day.

DR. KERRISON, in discussing these cases, said he would like to know if anyone present considered an X-ray picture necessary in every case. In the clinics, for example, this would be an immensely expensive procedure, and surely in a majority of cases the diagnosis may be made upon clinical symptoms alone. Purely as a matter of interest and not bearing on the question under discussion, it might be interesting to mention a case which came under his care. This patient, a woman, came to the hospital clinic about a year ago, with an acute middle ear suppuration. Within two days of the onset symptoms of diffuse suppurative labyrinthitis were present. She was admitted to the ward for observation and treatment, which consisted chiefly in keeping her as quiet as possible in bed, with, of course, the necessary cleansing of the ear. Dr. Kerrison was called away from the city some five days after her admission, and was surprised on his return to learn that the patient had insisted on leaving the hospital. This, of course, indicates that the symptoms of vestibular irritation had very largely subsided. When she next appeared at the hospital clinic there was no nystagmus, but the ear was still discharging and the patient was absolutely deaf in the involved ear. She was now sent to the hospital laboratory for an X-ray picture which gave a perfectly definite indication of involvement of all the mastoid cells on the diseased side. The patient, however, refused to return to the ward. Very shortly after this she went to Baltimore, where she came under treatment at the

Johns Hopkins clinic, where a very exhaustive study was made of her case. When later she returned to New York the drum membrane appeared absolutely normal, she had no pain, she was apparently in good health, able to attend to work of some importance, the only remaining symptom being absolute unilateral deafness.

DR. DENCH said he would like to ask Dr. Kerrison about this woman's labyrinth. He asked how this woman's temperature was running, if it ever reached 100 or 102 degrees, and whether she had had any nystagmus.

DR. KERRISON said the woman's temperature never went over 102 degrees. The main symptoms had been nystagmus and absolute deafness, of course with the usual phenomena of disturbed equilibrium.

DR. HARRIS said they had all come to a clear conception of what we would do on the third, fourth, or fifth day, with the clear cut mastoid symptoms, pain, sagging of the wall and discharge, but he asked what rule we were going to make in regard to our cases, which did not heal, as far as the discharge was concerned, at the end of the second or third week, and yet were without pain and the discharge not profuse. Were we accepting the position that a good many men had laid down, that if one did not get drainage through the auditory canal one must get drainage behind the ear. He asked was that simply a textbook statement or were we coming to that position without discussion.

DR. PHILLIPS said they should not permit the fact that there are atypical cases of mastoiditis to disturb their well founded convictions regarding the classical symptoms of the typical cases. We know just what to do for the typical cases, but the atypical cases require good judgment. To Dr. Phillips' mind that was where the radiograph gave stronger help than it did in the typical cases. No man should say that he did not consider a radiograph a very great help, but at the same time he did not think it necessary to have a radiograph made in every case. The radiograph should hold the position of confirmatory evidence. It was a very valuable adjunct and one they should certainly rely upon for purposes of verifying the diagnosis, and especially in these atypical cases. There were several reasons. It tended to tell one how extensive the

disease was, whether one had a large or small mastoid, the location and anatomic outlines of the lateral sinus, and further, the X-ray had an additional value in that it portrayed the pathologic changes in a most convincing manner.

A further point Dr. Phillips said, which Dr. Harris had brought out, led him to make a suggestion based upon very careful observation in a large number of cases with persistent discharge, in the second, third or fourth weeks, the pus continuously pouring out, there was nothing to do but operate. Dr. Harris had said his patient had had no temperatures. Dr. Phillips had been told this by patients and family physician time after time, but after he had put such patients in the hospital he had found some temperature. He regarded this as one of the most significant symptoms in delayed cases. It was his custom wherever an otorrhea persisted into the third week, with even a slight daily rise in temperature, even if it did not show the typical signs, and might not have tenderness or drooping of the posterior canal, to seriously consider operating. If these cases were verified by a radiograph, one had then very valuable evidence.

DR. LUTZ said, as Dr. Phillips had stated, that he had seen several such cases. He believed they got a faulty history very frequently from the family physician who sent these patients, assuring them that the patient never had any temperature. Dr. Lutz had put such cases under observation and regularly found a temperature. He said it might not be more than $99\frac{1}{2}$ or even 100 degrees.

He thought the X-ray was a valuable help in cases of this kind, because the temperature alone was not the cardinal symptom. The clinical picture may convince the otologist that an operation is needed, but he has to be fortified at times by outside means in the position he has taken.

DR. HARRIS asked Dr. Lutz if he thought the X-ray was of any value, except for moral effect.

DR. LUTZ said the value of the X-ray depended a great deal upon who took the picture. He had seen plates that did not tell him a definite thing, and other plates that really astonished him, in which he did not believe the disease so extensive as the plate showed.

DR. KERRISON suggested that the consensus of opinion could be very well stated by saying that the X-ray is useful in doubtful cases.

DR. LUTZ said he did not believe it necessary to take a picture in every case, because they saw so many cases where they had not the faintest suspicion of doubt but that the patient should be operated. He said if one had a doubtful case and a doubting family or consultant, a picture by a man who knew how to take one would be a great deal of value.

DR. DENCH said he was very glad to be asked to speak on this subject, in which he was very much interested, and he had considerable experience in reading them at St. Luke's Hospital. They had X-rays taken of every case where there was the least doubt in an ear that was not going to clear up; moreover, in a great many cases, especially occurring before the war, and they had often made them in every case of acute otitis media. Examination and comparison of a large number of X-ray plates, and plates taken at different intervals of the same patient, where they were not able to interpret what in a doubtful case the picture meant. In any case of acute otitis media after forty-eight hours they would find that the walls were indistinct. If they had an X-ray of that case going on to recovery, taken a week later, they would find that the plate would coincide with the clinical symptoms. Where one had infiltration that part of the plate would become white, then the walls would become more distinct, until one got just a little whitening close to the antrum, and then the whitening existed for a considerable length of time. They had other cases where the mastoid were better opened, and in a certain number these cases healed spontaneously and healed by sclerosis. In a certain number of cases, which Dr. Dench had reported, he had a series of plates taken, and after the first plates they were frequently operative on the eighth or ninth day, and in the absence of any symptoms it would have been foolish to operate, because of the plate before that time. Sometimes on the twelfth or fifteen day, the patient would still be doing well, and it looked better at the end of two weeks, and then the whole thing would stay cloudy and that might be sclerosis. The value of a series of X-ray plates is that it would help one to read plates accurately.

With reference to the remarks of Dr. Kerrison's case, of which he would like to hear the report, it struck Dr. Dench that he had seen the same condition in perilabyrinthitis in a man where they could not wait for the perilabyrinthitis to clear up. The man was absolutely deaf, except for loud sounds, and now he heard as well as he did prior to the attack. He showed exactly the same symptoms as Dr. Kerrison's case.

Dr. Dench said that roughly a picture would be most valuable about the fifteenth day. He operated on a nurse, in which the X-ray did not show anything, but he operated. Another point was, not only who made the X-ray, but who read the X-ray. He had seen X-rays which other men said were excellent, but he did not see anything in them. He got accustomed to reading plates by a certain man, and thought this man's plates better than any other man's, just because he got accustomed to reading them. Dr. Dench thought the whole point depended on the plate being read by the man who was accustomed to read these particular plates made by one radiographer. He thought they would learn a great deal more by simply following these cases up and have X-rays made in various stages than if simply confined to uncertain cases. A patient had come to Dr. Dench six weeks previously with an obscure history, in which he could not tell whether it was a furunculosis or acute otitis media. There were two or three little warty spots in the canal, and the drum membrane looked dull. The case history showed that the patient several years ago had a so-called mastoiditis and had just escaped operation and was taken care of by a very excellent man. Dr. Dench took the patient down to a certain radiographer and they both looked at the plate, and this man said it was not an operative case, and subsequently it cleared perfectly. He saw the case twelve days after inception of the acute condition, with a history of so-called mastoiditis several years before.

To show how very valuable this was, when the work was a great deal younger, seven or eight years ago, this certain radiographer enabled Dr. Dench to pick out little areas of softening and he found them absolutely so located at operation. For that reason he believed the X-ray was of the greatest possible advantage and would enable them to clear up doubtful cases. Whether he would operate on the X-ray

alone, he could not say. He said he had never seen any cases that did not show in addition to the X-ray some symptoms, some haziness of the drum membrane, some temperature or narrowing of the canal. He did not think $99\frac{1}{2}$ degrees a temperature, and if all the men had temperatures taken they might go over 99 at some time during the twenty-four hours.

DR. PHILLIPS said they were doing an enormous amount of X-ray work at the Manhattan Eye, Ear and Throat Hospital, and it was a daily occurrence, though probably not so frequent at the present time, because of the expense.

DR. DENCH said that he thought the use of the X-ray picture, simply to impress upon the family physician the necessity for operation, was wrong and savored of quackery. Many of these men would not have even the slightest conception of the meaning of the plate.

DR. LUTZ thought the plate made a lot of difference in convincing the patient that he needed a mastoid operation. The patient frequently appreciated the opinion of his family physician very much more than a man he has seen only two or three times. The picture would show what the patient could not be made to understand by talking with him. Dr. Lutz found that it was sometimes harder to convince the family physician that an operation was needed than it was to satisfy the patient. For all these purposes a plate was a help where everything else failed.

DR. HARRIS said he raised this question not because he had any concern that the gentlemen differed in their views, but because of the fact that a man who is doing a great deal of operating and is connected with two hospitals seemed to think that the use of the X-ray was a very rare and unusual thing. Dr. Harris said the gentlemen present had stated his views very decidedly. The X-ray was to him invaluable, of the greatest help in doubtful cases, and while he never would forget that they must emphasize the clinical findings, yet to have the apparent disregard that a good many men were still showing to such a valuable help in diagnosis surprised him, and he wanted this society to go on record that they were getting benefits in these doubtful cases. It was of course understood that these pictures must be good pictures. He thought those in our special hospitals were good pictures. He should be

very sorry indeed to see the X-ray taken away for the help in these doubtful cases, and he felt that what had been said should receive publicity at some time or other.

Mastoiditis With Staphylococcus in Pure Culture.

DR. PHILLIPS said he would like to emphasize a point made in connection with some cases that he had reported last winter, where the infecting organism in a number of mastoid cases was staphylococcus in pure culture. He had not the figures of the cases of mastoiditis in private and hospital practice, but a considerable proportion of these cases showed the infecting organism to be the staphylococcus. He had a series of these cases and reported two before the society, and he said the chairman had then stated that cases of that kind had not come under his notice. Dr. Phillips inquired whether such cases had turned up since at other institutions. Dr. Dwyer had gone very carefully into a study of these cases with him and the cultures had been made in all cases.

DR. DENCH said he could not answer for any such cases, and he had gone into the matter very carefully. He had reports of staphylococcus coming back to him, and they always turned out streptococcus or pneumococcus. He had had only one such true case, and had forgotten whether it was albus or aureus. He also had such cases at St. Luke's Hospital, with a report of staphylococcus, and when he sent them back to the laboratory again they changed into something else.

DR. PHILLIPS said they ran their cases through pure culture in every case, and he would bring this matter out with Dr. Dwyer. Dr. Ducl had also had such a case, which was fatal.

Discharging Ear and Dizziness Complicated With Syphilis.

DR. LUTZ said he wanted to mention a case he had seen some time in June, a patient from the Brooklyn Eye and Ear Hospital, having pain in his ear and complaining mostly about dizziness. When Dr. Lutz saw him he urged him to stay in the hospital. He came in that night, went out the next day and then came back to the clinic. He was more dizzy and his mastoid pain was worse. The ear was discharging profusely. Dr. Lutz did not see him the second time, but the assistant surgeon in the clinic urged the patient to come back to the

hospital and be operated on, but he got away. They did not know anything about him for nearly three weeks. Dr. Lutz was then asked to go to the Bushwick Hospital to see a man who had been operated upon, and it proved to be this patient, but he was still dizzy. After he had been taken into the Bushwick Hospital he showed a four plus Wassermann reaction, but they did not get the record until after the operation. Dr. Lutz wondered if that dizziness might not have been due to syphilis. They did not do any further operation, but the patient got perfectly well after being put on antisyphilitic treatment. When he first appeared in the clinic he seemed to have an acute labyrinthine involvement from his mastoid involvement.

DR. PHILLIPS said it was very fair to assume that so far as the labyrinth condition was concerned, it was due to syphilis.

DR. LUTZ said he wondered in one of the cases Dr. Kerrison had, whether that case had been specific and his hearing had improved after treatment. He said he thought it was probable that where the hearing had gone and afterward returned this was a possibility.

Examination of Army Aviators.

DR. KERRISON related the interesting findings in the case of an applicant for the army aviation corps, who came before him for examination. This was a young American, twenty-two years of age, who had always enjoyed excellent health. He had also been something of an athlete as a short distance runner. Dr. Kerrison's examination was solely in regard to his static labyrinth. After the prescribed method he was rotated ten times in twenty seconds—first to the right and then to the left. There was absolutely no nystagmus after rotation in either direction. He was then rotated ten times in ten seconds—first in one direction and then in another, following which the man pointed with absolute accuracy—that is to say, he showed no past pointing—and there was still no nystagmus. To carry this test still further the man was again rotated ten times in ten seconds and directed immediately to stand with eyes closed in the Rhomberg position. This position he was able to maintain without any difficulty. According to army regulations this man would be rejected for the service, yet one

would think that he might prove a particularly fit subject for aviation work.

DR. DENCH asked if this man who was examined for the aviation corps had ever had cerebrospinal meningitis.

DR. KERRISON said, in answer to Dr. Dench, that this man had never had cerebrospinal meningitis. He had never suffered any disturbance of equilibrium which led him to think that his static mechanism was in any way at fault.