through the opening made at the operation and was thence blown out.

*Comment.*—Points of particular interest in the case are :—

1. The occurrence of a rhinolith in the antrum : According to St Clair Thomson, only five such cases have been reported.
2. The occurrence of an ascending infection from maxillary to frontal sinus : The converse of this is recognised as being frequent, but I cannot recollect ever having seen a case in which this sequence was undoubted.

# SOCIETIES' PROCEEDINGS

## ROYAL SOCIETY OF MEDICINE—SECTION OF OTOLOGY.

*President*—DAN M'KENZIE, M.D.

**November 6, 1926.**

**Dermatitis of the External Auditory Meatus.** — DAN M'KENZIE, M.D.

**Common Inflammatory Affections of the Skin of the Outer Ear.**—A. M. H. GRAY, C.B.E., M.D.

**Intractable Dermatitis of the Pinna and External Auditory Meatus, Secondary to Chronic Suppuration of the Middle Ear.**—F. C. ORMEROD, M.D.

These Papers are published *in extenso* in the *Journal of Laryngology and Otology*, Vol. xlii., March 1927, pp. 149-167.

### DISCUSSION.

Dr KERR LOVE, speaking of cases of chronic dermatitis, asked whether Mr Ormerod had seen local inflammation of bone, *e.g.*, exostosis. He (the speaker) had seen cases in which exostosis had occurred on both sides. It disappeared on treatment, on one side after a mastoid operation, on the other after a clearance of the canal debris, resulting in a widening of the canal. In the experience of most, the condition did not disappear, except under operation.

Mr VLASTO called attention to a type of case with which most otologists were familiar. The patient was nearly always a female. Her complaint was one of intense irritation of the meatal canal, associated perhaps with a slight discharge. The wall of the meatal canal was reddened, and the view of the drumhead was masked by epithelial debris and muco-pus. When, after some difficulty and after causing the patient pain, the outer surface



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of the membrane was cleared for inspection, it became evident that it was imperforate, but that its outer epithelial layer shared in the pathological process so that the details could not be made out.

He had found this type of case very unyielding to treatment, chiefly, he thought, because the irritation was so great that patients could not resist the temptation to scratch. He had had most success, perhaps, with the use of a solution of 2 per cent. silver nitrate. One of his patients had deserted him, and was said to have been cured in Paris by a single exposure of ultra-violet light.

Mr H. TILLEY, in speaking of rebellious cases in which the irritation was confined to the external meatus and without perforation of or suppuration in the tympanum, said that two cases which failed to be cured by the usual application had been cured in two sittings by zinc ionisation. With regard to cholesteatoma of the external meatus, the President said there was nothing for it but to remove the accumulation with a sharp spoon. He (the speaker) suggested that before employing this painful method, use should be made, on three successive nights, of a solution containing 20 gr. bicarbonate of soda, 20 gr. salicylate of soda, and one minim of carbolic acid, with equal parts of distilled water and glycerine to the ounce. That would soften the hardest cholesteatoma, and then it was easy to remove it by syringing or by using a blunt hook without inflicting pain. In cases of chronic eczema with stenosis associated with intractable suppurative otorrhœa, he did not hesitate to perform a mastoid operation in order to remove the septic factor in the meatal lesion. The operation generally cured the trouble, which might otherwise be a chronic and painful inconvenience.

Mr ARCHER RYLAND said that he always viewed with apprehension the prospect of performing a mastoid operation in these cases. In some instances, however, such operation would become necessary. Where there was chronic infection of the external ear, auricle, or meatus, there was always a danger, after operation, of general infection and subsequent absorption of the cartilage of the pinna, followed by the well-known shrinking deformity of the auricle. Could Mr Ormerod say what were the probable septic conditions of the external ear which might lead, after operation, to this disastrous result?

Dr W. H. KELSON asked whether any cases of the kind being discussed were found to be associated with malignant disease, and whether that was a likely termination.

Dr E. A. PETERS drew attention to the association of meatal dermatitis and septic tonsils. In many of the cases the meatal dermatitis subsided when the tonsils had been removed. In acute infection it was not unusual for the Eustachian tube, middle ear, and external auditory meatus to be infected at the same time, when the meatus exhibited acute dermatitis; in the chronic cases under review, submucous or mucous infection occurred.

Dr A. M. H. GRAY (in reply) said he was not specially familiar with the type of case Mr Vlasto mentioned as a clinical entity. It might be from the description a low form of dermatitis due to a definite organism. Unless an organism could be found, it could only be treated as a general dermatitis; it might be well to insert a radium tube for a short time.



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Some cases of superficial dermatitis cleared up after zinc ionisation, but the method was not largely employed by dermatologists, because other methods, such as X-rays, were easier to apply. He had been interested in hearing the opinions as to dealing with ear discharge, especially by the mastoid operation and removal of tonsils. It was very important that the ear discharge should be stopped in order to ensure recovery from the dermatitis. He thought, however, that the risk of septicæmia from an eczematous skin was very small, as the infection was of a very low type of virulence.

**Otosclerosis associated with Blue Sclerotics and Osteogenesis Imperfecta.**—F. J. CLEMINSON, M.Ch.

This Paper is published *in extenso* in the *Journal of Laryngology and Otology*, vol. xlii., March 1927, p. 168.

DISCUSSION.

Dr DAN M'KENZIE (President) said that any contribution which shed light on the subject of fragilitas ossium was welcome. Otosclerotic bone changes, it would seem, might be regarded as due to a large variety of causes.

Mr G. J. JENKINS said that he had had under observation four families having this condition. He saw two members of one of the families four days ago, and he had a specimen of a temporal bone from a case of the kind, which was being decalcified. In no member of these families was there any deafness whatever. Three years ago he read a paper on osteitis deformans, and in his cases the associated deafness was similar to that of "otosclerosis."* Since then he (the speaker) had collected records of about thirty cases of osteitis deformans in which the head was involved and about 90 per cent. of them were suffering from so-called otosclerosis deafness. In other words, this disease must be regarded as a syndrome which was common to various diseases of the bone. His experience was that when the disease of the capsule of the labyrinth invaded the endosteum, some form of deafness resulted. If eventually the disease reached the foramen ovale, clinically the classical symptoms of otosclerosis were disclosed. There were cases, in families, of internal ear deafness in which otosclerosis was a marked feature, and in which no middle-ear deafness existed until the last phase. He looked upon all these as cases of bone disease, and a description of the bone disease should be given when describing the deafness. There was a syndrome—which might be termed the otosclerosis syndrome—depending on disease of the capsule. He had had cases in which the disease reached, but did not involve, the endosteum, and the patients were not deaf; other cases in which the endosteum was involved and the patients were deaf. There should therefore be a new name given to this hereditary complaint, one indicating that it was a bone disease, not a disease of the ear itself. Investigations into otosclerosis must be along those lines. He had hoped Dr Stebbing would have been at the meeting, as he was much interested in the subject under discussion. He (Dr Stebbing) had seen a number of cases at Lambeth Hospital,

* *Journ. of Laryngol. and Otol.*, 1923, vol. xxxviii., p. 344.



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where he (the speaker) saw two of the families with osteogenesis imperfecta; the other two cases occurred in King's College Hospital. Later, he intended to give a full account of these cases, and the findings in connexion with the hearing. Mr Sydney Scott had given a complete description of the examination of several members of a family with osteogenesis imperfecta and showed that they had symptoms and signs of the deafness of otosclerosis.

Dr J. S. FRASER said that the more he saw and heard about otosclerosis, the less he felt he knew about it. If there was any subject in otology which needed investigation, it was this. One did not need to sympathise overmuch with patients of 75 or 80 years of age suffering from nerve deafness, but otosclerosis often affected girls from 18 to 25, who needed to earn their living. One might regard otosclerosis from many aspects, *e.g.*, from the point of view of heredity, of age and sex, of previous attacks of middle-ear inflammation, of endocrine gland disturbance, etc. To-day, Mr Cleminson had called attention to the syndrome of fragilitas ossium, blue sclerotics and otosclerosis, in which mesenchymatous tissues were involved. Possibly in these people there was a hereditary weakness of the mesoblast from which the bones, sclerotics, and labyrinth capsule were developed. It was important that more work should be done on the etiology of otosclerosis, for we already know the histological changes fairly well.

Mr CLEMINSON (in reply) said that he regretted he had not allowed himself time to refer to Mr Jenkins's cases of osteitis deformans. They supported the idea that otosclerosis was not a condition by itself, but often was only part of a larger clinical picture of disease of the bones. What Mr Jenkins said about the middle-ear type of deafness sometimes being late in onset was possibly the explanation as to why in Adair Dighton's case of "nerve" deafness the cause was not recognised as otosclerosis. It was very rare to find families which showed the complete triad. He fully recognised all the work Mr Scott had done.

**Recurrent Meningitis from a Leaking Cerebellar Abscess.**—DAN M'KENZIE, M.D.—A boy, aged 7, was admitted in October 1922 and died in January 1923.

On admission, the patient, who had chronic suppuration in the right ear, was semi-comatose, but a history was obtained of severe occipital headache of three days' duration. Apart from the mental dullness, no sign or symptom was manifest. Spontaneous nystagmus was absent. The temperature was normal.

The patient was operated on on the day of admission. Lumbar puncture was first of all performed; the cerebro-spinal fluid was slightly turbid, and subsequent examination revealed lymphocytes and a coliform bacillus. When the mastoid was opened a cholesteatomatous cavity was found, and as it led back towards the posterior fossa the bone was removed and an extradural abscess, perhaps in the saccus endolymphaticus, containing about half a drachm of pus, was evacuated. The dura mater was incised and a quantity of fœtid pus and cerebro-



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spinal fluid obtained. As the space was too limited for drainage, the occiput was opened behind the lateral sinus, and an abscess cavity in the cerebellum containing pus was found on exploration with the pus-searcher. Two drainage tubes were inserted through the posterior opening into the abscess cavity, and a third from the mastoid cavity towards the basal cisterna.

Improvement followed the operation. The patient became bright and active; all meningeal signs subsided; and as the abscess cavity ceased discharging, the tubes were removed.

A fortnight after the first operation, a sudden elevation of temperature to 103° F. took place, with cervical rigidity and mental dullness. The cerebro-spinal fluid from the lumbar spine was clear, and on exploring the cerebellar abscess cavity, no pus was found.

Improvement again followed this intervention. Then a fortnight later recurrence of symptoms again appeared with spontaneous nystagmus and headache.

A third operation revealed the cerebellar abscess cavity full of fœtid pus, and the cerebro-spinal fluid from the lumbar region contained diplococci and pus-cells.

Again the patient got well and remained so for a fortnight, when a recurrence of symptoms led to a fourth intervention, and after this, for five weeks, no symptoms were manifest. At the end of that time, however, the temperature began to rise, and the abscess cavity was found distended with cerebro-spinal fluid. The patient died a few days later.

Post-mortem showed purulent meningitis with fibrous adhesions in the cisternæ, resembling epidemic cerebro-spinal meningitis. The cerebellar abscess cavity we had been draining showed a nipple-like opening in the anterior aspect of the cerebellum. It contained no pus. But a second cerebellar abscess was found, entirely separate from the first, without any opening into it. The explanation of the course of events obviously is, that the larger abscess cavity had been repeatedly re-infected from its satellite abscess, and that each time it filled up a leakage took place through the tiny opening on the surface of the cerebellum and induced the recurrent attacks of meningitis.

**Auditory Disharmony** — PHILIP FRANKLIN, F.R.C.S. — Male, aged 60, professional violinist. First seen September 1926. After a severe head cold three years ago, patient complained of loss of appreciation of musical sounds in both ears for all instruments except the flute and whistle. He was in consequence unable to play or sing in tune. There was complete loss of appreciation of harmony. After six months, musical sounds were interpreted as a disturbing noise. There was no history of any previous ear trouble. There has been some, but relatively little, loss of hearing. Fork $C_4$ heard distinctly; gradual diminution



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of hearing for lower forks; C zero not heard at all. Rinné positive; conversational voice heard at 4 feet; occasional tinnitus. There is no indication of intracranial growth.

Dr DAN M'KENZIE (President) said he had come across a number of cases of disharmony, but never in a patient whose hearing was otherwise unaffected. A pianist once came to see him because all the notes he played with his left hand had gone flat, and he noted that he was a little dull of hearing on the left side. There was found to be a subacute catarrh of the middle ear. The hearing was found to be half a tone lower on the left side than on the right. Eventually the two ears came into balance again. The other cases he had seen, also in musical people, were late cases of otosclerosis. He had known singers who could no longer take the key, and it was very distressing to them, especially as some had to earn their living as singers. It seemed almost as if the appreciation of harmony was a function distinct from ordinary hearing.

Mr J. A. GIBB said that he had seen a singer who had a sudden attack of deafness, with facial palsy on the left side. She was quite unable to sing in tune. The condition cleared up under iodide of potassium. There was no history of syphilis.

## PROCEEDINGS OF THE FORTY-EIGHTH ANNUAL CONGRESS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

**Montreal, June 3, 4, 5, 1926.**

(*Notes from the Report of Charles J. Imperatori, M.D.*)

*The Use of Radium in Polypoid Ethmoiditis.*—Dr Samuel McCullagh presented a report upon the subject, based upon the post-operative treatment with radium of seventeen cases of polypoid ethmoiditis. Benefit resulted in all of them. A capsule containing 50 mg. radium was applied to the ethmoid region for two hours. The dosage was repeated four or five times at intervals of ten days to two weeks.

The conclusions at which he had arrived were that the intervals between the recurrence of nasal polypi were lengthened; the fibrous element in the polypi became more pronounced and the volume decreased; accompanying asthma was relieved. The question of definite cure was still *sub judice*, but radium was the most effective agent yet found for the control of this condition.

In the discussion which followed, Dr Swain stated that he had used successfully this line of treatment in four cases. One case he regarded of sufficient merit to record in detail. The polypi were extensive, were present also in the frontal sinuses, the intersinus septum being eroded. He opened both frontal sinuses and removed a large



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