that the lumen was diminished to the size of a No. 4 catheter. Anti-syphilitic treatment produced no amelioration of symptoms, and the patient was slowly strangled by contraction of the mass during seven weeks. The larynx was healthy.

Dr. ROBERT WOODS had examined the patient and inspected the trachea as far down as the eighth ring, but could not make out the obstruction.

Dr. MCWEENEY said that the tumour consisted of lympathic gland tissue, caseous in the centre and exhibiting giant cells and a considerable amount of fibrous tissue. He considered the mass to be gummatous.

Ernest Waggett.

THE AUSTRIAN OTOLOGICAL SOCIETY.

Meeting, February 25th, 1896. ("Monatschrift fur Ohrenheilkunde, March 1896.")

Dr. KAUFMANN. *A Case of Peri-Sinusal Abscess with Pyæmia cured by Operation.*

A girl, aged twelve, who had suffered for several years with ear disease, became affected with rigors of about half an hour's duration. On the 22nd January and on the two following days they recurred, and unconsciousness and vomiting supervened. There was loss of sleep, intense headache, and vertigo. She was taken into Prof. Politzer's wards in a somnolent condition; her temperature was 38·5; she had repeated vomiting. The right ear was normal; the meatus of the left ear was filled with thick offensive pus, and it was very narrow, so that the structures of the middle ear could not be recognized. The soft parts over the mastoid were normal, but at the point there was a certain amount of tenderness, as also in the region immediately below. The radical operation was at once proceeded with. The mastoid process was found hyperæmic, and at a moderate depth pus was met with in considerable quantity, along with moist, dirty, grey-green, cholesteatomatous masses. After a thorough clearance of the granulation and cholesteatomatous tissue in the attic and middle ear, the sinus was exposed in its whole course in the temporal bone. Around it was found thick pus, the wall of the channel was discoloured, but fluid blood was distinctly demonstrated in the interior. The sinus was therefore not opened; the posterior wall of the meatus was covered by the usual plastic proceeding, and an iodoform gauze bandage was applied. Next day the temperature was down to 37·9, there were no rigors, and steady and rapid improvement took place.

Dr. GOMPERTZ. *Congenital Abnormality of the Pharyngeal Orifices of the Tubes and Diverticulum in the Roof of the Pharynx.*

This was a patient aged twenty-three, and otherwise normally constructed. Both tubal orifices projected well into the naso-pharynx. From the upper part of each a ridge extended upwards to the roof of the pharynx, where both joined together and formed a sort of arch. It

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appeared to consist of the same tissue as the tubal swelling. On the one side it seemed to roof over the choanæ, and behind it it left a kind of cavity. There had been no operative interference, and no evidence of syphilis; therefore it was looked upon as congenital.

Prof. POLITZER. *Osseous Defect in the Outer Wall of the Attic.*

The apertures in the attic remaining after the total destruction of the membrane of Shrapnell have been explained by some as due to the separation of the bone from its nourishing periosteum. This was possible only for the lower thin margin, but not for the thick upper part, which was well supplied by vessels from above. Walb's view, that a primary purulent osteitis of the tympanic margin was the cause of suppurative inflammation in the attic and its resulting caries, was not proved.

Prof. Politzer is of the opinion that after the laying bare of the margin of the notch of Rivini in the course of septic suppuration, pyogenic and saprophytic bacteria make their way into the cavities of the bone and lead to its destruction. The longer the suppuration lasts the greater is the extent to which the bone breaks away. In some cases, therefore, we find small, and in other cases very large, osseous defects after healing has taken place.

Prof. Politzer demonstrated the following preparations:—

1. A preparation from a subject aged seventy-five. Drum membrane entire. Shrapnell's membrane quite destroyed. Above the short process a pea-sized defect in the bone of the outer wall of the attic, through which a cholesteatoma had made its way from the meatus behind the bodies of the malleus and incus into the tympanum. In the deep parts of the attic there was a branched connective tissue membrane.

2. A preparation from a subject aged eighty-eight. The posterior half of the membrane was destroyed: the anterior, thickened, was attached to the malleus, and in contact with the inner wall of the tympanum. Above the short process there was a large irregular defect in the bone, which extended into a part of the meatus, and exposed the mastoid antrum. There were dirty white cholesteatomatous masses in the attic and antrum, and the tympanic orifice of the tube was closed by connective tissue.

3. A preparation from an unknown subject with concave indrawing of the membrane, which adhered to the inner wall of the tympanum. There were extensive defects of the bone in the outer attic, and through these the head of the malleus could be seen freely exposed. Similar appearances, in which the body of the incus was absent, had been shown by Gruber and Gompertz.

4. A preparation with extreme thickening and pigmentation of the membrane. There was a defect in the wall of the attic, loss of the incus and head of the malleus.

5. Preparation from a tuberculous subject with carious destruction of the wall of the attic and of the tegmen tympani. There were numerous perforations through the dura mater, and death took place from meningitis.

6. Decalcified section through the tympanic cavity from a patient

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aged thirteen, who had died of acute pleurisy. There was destruction of the membrane of Shrapnell, and of a portion of the wall of the attic, adhesion between the head of the malleus and the tegmen tympani, and between the tympanic membrane and the inner wall of the cavity, as had been observed by Hartmann in cases of Shrapnellian perforation.

Prof. GRUBER drew attention to the fact that some years previously he had, in the "Wien. Allgemeine Med. Zeit.," published a report on secondary dilatations in the temporal bone, with his theory as to the mode of their formation. He specially remarked that at the upper part of the inner margin of the outer meatus the drum membrane derived its tissues directly from the soft parts of the meatus, and that in this situation there was no annulus cartilaginus; that the blood vessels were more pronounced, and, therefore, also the structures of that part were in general more disposed to severe inflammation, and the bone was not protected by the annulus cartilaginus as it is in other parts, and was therefore also more easily broken down by suppuration. As a cause predisposing to infection of the antrum, he pointed to the structure of the portion of the squamous bone which joined the mastoid, which consisted of a more diploetic substance, and in which there were demonstrable cell spaces even immediately after birth, in which infection through the invasion of microbes could easily take place, and a breaking down of the bone in that way so much the more easily occur.

Dr. ALOIS KREIDL. *Demonstration of a Cat in which both Acoustic Nerves had been destroyed a year previously according to a Modification of Ewald's Method.*

The operation was effected in such a way that after the bulla was laid open the acoustic nerves, along with the facial, were destroyed by means of a Paquelin's cautery introduced from the foramen rotundum through into the internal auditory meatus. When the auditory nerve is being destroyed there is observed during the operation an outflow of cerebro-spinal fluid and horizontal nystagmus. At the end of a year the animal had the following symptoms, which were demonstrated: feeling its way about, audible(?) gait, persistent movements of the head, awkwardness in seizing its food, in running, and various disturbances of equilibrium, and loss of the galvanic reaction. Dr. Kreidl attributed these disturbances to the elimination of the organs of equilibrium in the internal ear.

Dr. FALT. *Post-mortem appearances in a Case of Ménière's Disease due to Leukhæmia.*

This was a day labourer, aged sixty-six, who had never been seriously ill up to the winter of 1894, but at this time began to complain of head-ache, weakness, and extreme dulness. In June, 1895, he became unconscious after severe vertigo and tinnitus, and when he came to himself again found his hearing almost entirely gone. It was, however, only after fourteen days that a complete loss of hearing took place. Up to that time the patient was in bed, was frequently affected with attacks of vertigo, and in July, 1895, he was admitted into the hospital. A high degree of myelo-lienal leukhæmia was diagnosed. [2,600,000 red to

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600,050 of white blood corpuscles, about 1-4th, numerous single nucleated granular red blood corpuscles, enormous tumour of the spleen, enlarged liver, and extensive hæmatomata.] Inspection of the ear showed the drum membrane strongly indrawn on both sides, opaque, and with diminished light reflex. A tuning-fork, C^2, was not heard by the bones. In front of the left ear, and on the left mastoid process, C^2, C^1, and C were not heard, and in front of the right ear only the fork C^2, C^1, and C when very strongly struck, and then only for a much shortened time, while through the bones they were not heard at all. Very loud speech was only heard in immediate contiguity to the right ear, and on the left side there was complete deafness. A galvanic current of from fifteen to twenty milliampères failed to induce giddiness. Death took place on September 8th, and on section there was found myelo-lienal leukhæmia, with suppurating leukhæmic hæmatomata. Both temporal bones and the cerebral trunk were taken over for examination by Drs. Alt and Pineles.

These parts were treated according to the Weigert-Pal method, and showed the following changes:—In the intra-medullary course of the auditory nerve, both in the lateral and in the median root, there were in numerous places leukhæmic small-celled infiltrations, some minute, others very large. In particular the point of exit of the auditory nerve, where the two roots joined together, was extremely infiltrated, and the pia mater was slightly thickened as well as infiltrated with small cells. Moderate degeneration of the fibres of the nerve were here and there recognizable. The auditory nuclei, the posterior corpora quadrigemina, and the cerebellum showed no pathological changes; there were nowhere either hæmorrhages or remains of such.

The middle ear was absolutely normal; the appearance of the labyrinth, as verified by Drs. Kaufmann, Gruber, Politzer, and Weichselbaum, was absolutely negative. There was no evidence of such leukhæmic changes in the labyrinth as had hitherto been described, though very minute alterations could not be absolutely excluded on account of the extreme decalcification of the preparation. In the cases which have hitherto been published, the pathological changes were found either in the labyrinth (Politzer, Steinberg, etc.) or the middle ear (Gradenigo). As regards changes in the auditory nerve there is no mention in these examinations, doubtless because no examination of the nerve—or at least of its cerebral origin—was made. This is therefore the first case in which leukhæmic infiltration of the auditory nerve has been found.

Seeing that in the whole of the literature no case of isolated auditory nerve affection has been described as giving rise to Ménière's disease, this case may be looked upon as unique in this respect. The fact that currents of from fifteen to twenty milliampères produced no galvanic vertigo in the patient would have to be explained, according to Polak's experiments, as due to a throwing out of gear of the co-ordinating apparatus.

Prof. GRUBER insisted that in the numerous sections which the reader had placed before him for examination no trace of Cortis's organ was present. Among all those which he had examined during his long

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experience in which the labyrinth had been developed, he always found at least a trace of Cortis's organ: but in these preparations the part was as if shaved away, leaving no traces, while even in the capsule of the labyrinth no abnormalities were to be found. The whole thing gave him the impression that in the decalcification Cortis's organ had been destroyed, and he thought it was unsafe to infer from the appearances found that the leukhæmic infiltration had in this case affected the auditory nerve alone, and had spared the structures of the labyrinth. At the same time the appearances in the auditory nerve were of the greatest interest.

Dr. ALT replied that he attached the greatest importance to the leukhæmic infiltration of the auditory nerve, and he had brought forward as a subsidiary matter the question as to whether this alone was sufficient to give rise to Ménière's complex of symptoms.

Dundas Grant.

SOCIETY OF HUNGARIAN OTOLOGISTS AND LARYNGOLOGISTS.

Fourteenth Meeting, November 21st. 1895.

("Monats. für Ohrenheilkunde," February, 1896.)

Dr. ZWILLINGER. *Laryngeal Paralysis resulting from Disease at the Base of the Brain.*

The patient was brought before the meeting of the Royal Medical Society on October 26th as a case of syphilitic basilar meningitis, and the appearance of the larynx was shortly described. Although the interesting symptoms had somewhat diminished under treatment, there was still sufficient remaining to bring before the society. The patient was a serving man, aged thirty-five. In March, 1895, there came on right-sided facial paralysis, which persisted without improvement in spite of iodide of potassium and electricity. Further there was absence of hearing for the watch in the right ear. Syphilis was denied, but in 1880 two warts had been removed from his penis which had formed during the course of a blenorrhœa. In 1884 he had pains in the right arm, for which a plaster of Paris bandage was applied without effect, but they ceased after twenty-five inunctions of mercury. On the 17th of October of last year the patient complained of general constitutional disturbance and headache; he was also unable to move the right eye outwards; had double vision, hoarseness, and regurgitation of food. On investigation there was found to be abducent paralysis, paralysis of the pharynx and larynx, anæsthesia of the trigeminal and auditory nerves of the right side; sight was normal; the fundus of the eye, apart from venous hyperæmia, showed nothing unnatural. Syphilis of the base of the brain was diagnosed, and treatment with inunction instituted. After the fourth injection the more recent nerve paralysis began distinctly to diminish, and at the present moment the paralysis of the sixth and of the right

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