perfectly healthy child, and the anæsthetic was administered by one of the most expert anæsthetists in St. Louis. Just as the operation was about to begin the patient stopped breathing, and, despite two hours of hard work, life could not be saved.

Dr. J. S. KIRKENDALL (Ithaca, New York) had employed chloroform for the past fifteen years, administered always by an expert, who had given it over two thousand times. He was uneasy when a novice administered chloroform. To say that every practitioner is able to give chloroform is absurd. He believed in anæsthetics being given by specialists who devote practically their whole attention to this one work.

Dr. CLIFTON M. MILLER (Richmond) had given chloroform for twenty years, in between seven and eight hundred cases, and had never seen a fatality. It was much more commonly employed in the south than in the north. In his experience the respiration was more quickly affected than the heart. He had seen the respiration entirely suspended while the heart was still beating. He deprecated the practice of turning the patient upside-down for purposes of resuscitation. One of the best methods of reanimation known to him is rapid dilatation of the sphincter ani, without stopping artificial respiration.

Dr. G. HUDSON-MAKUEN (Philadelphia) expressed his preference for ether over chloroform, and called attention to the fact that statistics show a far greater mortality with chloroform than with ether.

(*To be continued.*)

AUSTRIAN OTOLOGICAL SOCIETY.

March 18, 1912; *Monats. f. Ohren., year* 46, *No.* 4.

PROF. POLITZER *in the Chair.*

Abstract of Proceedings.

Angeio-Sarcoma of the Middle Ear, Shrinkage of the Growth under Continuous Application of Fresh Lemon-Juice.—Ernst Urbantschitsch.—A woman, aged seventy-six, shown at the Society three years ago, now after two ineffectual attempts at removal had a growth of this nature presenting at the meatus. Further operative treatment was contra-indicated on account of her age. Although the tumour did not tend to invade adjacent tissue—she had been under observation eight years—still, she was in danger from hæmorrhage, and thus it became necessary to attempt some treatment, and all manner of applications had been tried, but with no effect.

Since June, 1911, the continuous use of fresh lemon-juice had been adopted, with the result that not only had all appearance of bleeding ceased, but the growth had shrunk to about half its former size. The exhibitor suggested that this method might be tried in other like inoperable cases, and also possibly be of use in the treatment of purulent conditions of the middle ear associated with exuberant granulations.

Deafness (?) after Salvarsan.—Daniel Kaufmann.—A woman, aged twenty-two, acquired lues in 1910, was treated by inunction, but had a relapse in 1911, for which she was given an intra-muscular injection of 0·5 gr. salvarsan March 24, 1911. Prior to the injection the ears had

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been pronounced normal by Beck. Soon after her discharge from hospital rapidly progressive deafness set in accompanied by dizzy feelings. Examination now showed normal membranes and middle ears, but complete deafness for watch, speech and pipe. Galvanic reaction with 8 ma. gave no response, and the cold caloric test resulted in very slight horizontal nystagmus under extreme deviation of the eyes, but unaccompanied by any subjective disturbance. She could stand or walk with the eyes closed without trouble. Whether this complete deafness was the sequel to lues or salvarsan could not be determined. The patient was having energetic anti-luetic treatment at the present time, and if no restoration of hearing occurred, it would seem highly probable that the condition was due to the drug.

In the discussion which followed on this latter point various opinions and suggestions were offered, but no accurate data were apparently, as yet, forthcoming on which to base any definite conclusion.

Abscess of the Right Occipital Lobe.—Daniel Kaufmann.—A boy, aged ten, otherwise quite healthy, had an attack of right earache with fever, Christmas, 1911, and was admitted to the hospital early in January, 1912, complaining only of very severe headache and dizziness. The membrane gave the appearance of acute middle-ear inflammation, but the hearing was good although spontaneous horizontal nystagmus was present. The patient was kept under observation, and on the 13th it was noticed that he was lying very quiet, quite conscious, but with a fixed stare. In reply to questioning he answered that he only had a headache. Some hours later twitching of both eyelids occurred, followed by tonic and clonic movements of the whole of the left side of the body, commencing apparently in the face. This attack, which lasted some two or three minutes, was succeeded by loss of consciousness, pupils dilated and reactionless (exaggerated patellar reflex), no neck stiffness.

Operation, which was at once performed, disclosed an abscess at the base of the mastoid, reaching backwards into the extra-dural space. Lumbar fluid normal. Immediately after the operation the patient recovered well, could speak, and gave no sign of any paralysis. The pus contained *Streptococcus pyogenes*. Normal afebrile convalescence till the fifteenth day after, when the temperature rose, pulse 120, vomiting and headache. On February 1, therefore, the temporal lobe and cerebellum were explored, but with a negative result. The boy died on February 7, and at the *post-mortem* an abscess was found in the right occipital lobe.

June 24, 1912; Monats. f. Ohren., year 46, No. 7.

PROF. POLITZER *in the Chair.*

Abstract of Proceedings.

Syphilitic Neuritis of the Facial and Vestibular Nerves.—Siegfried Gatscher.—The case was that of a woman who had been sent to the exhibitor for operation on account of giddiness, headache and vomiting of some eight days' duration. The patient had suffered with a continuous left otorrhœa since childhood, and about eight months ago had acquired lues. Three and a half months ago facial paralysis appeared, which, at the present time, was to be seen in all three branches. Examination revealed a peripheral quiescent perforation, no caloric response

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on the left side, and the hearing tested with the noise apparatus reduced to Cv. 1 m., Whp. 15 cm.—such, that is, as would correspond with the result of the old-standing otorrhœa.

Considerable discussion followed as to the true causation of these symptoms, and although it was suggested that the chronic aural discharge might have been responsible for them, the fact that the function of the cochlear nerve persisted whilst that of the vestibular was quite lost was held sufficient to exclude purulent labyrinthitis, and therefore the lesion was regarded by the majority as attributable to lues.

A Case of Isolated Persistent Paralysis of the Vestibular Nerve due to Salvarsan.—J. Braun.—A woman, aged twenty-seven, with a secondary rash, was given a subscapular injection of Ehrlich-Wechselmann's emulsion October 13, 1910. In December, tinnitus, giddiness and deafness appeared on the left side. Under the influence of injections (presumably of mercury) the giddiness and deafness disappeared, but the tinnitus was unaffected. A papular eruption, which occurred in November, 1911, yielded to inunction and pot. iod. The woman had now again applied for relief on account of the tinnitus and severe nocturnal headache, and on examination the tympanic membranes were found normal, and the hearing approximately normal also. Ten rotations to the right produced very coarse, slow, rotatory nystagmus, and ten rotations to the left a very marked rotatory horizontal nystagmus, whilst a very similar result was obtained with the caloric test. No disturbance of equilibration, no Romberg, ocular fundi normal. Thus an isolated lesion of the left vestibular nerve had followed the injection of salvarsan some three months after the treatment. It was noteworthy that the original affection of the cochlear nerve completely cleared up under anti-luetic treatment, whilst in this case the vestibular nerve appeared so much more vulnerable, that after two years no compensation appeared to have taken place.

H. Frey, in discussing the case, referred particularly to the statement in the last sentence, from which he said we must conclude that compensation can only occur under certain special circumstances, of which, at present, we were in ignorance.

Traumatic Lesion of the Labyrinth and Salvarsan.—O. Beck.—This case was shown to illustrate the contra-indication of salvarsan in all lesions of the inner ear other than those due to syphilis. A man, aged thirty-two, had sustained a severe head injury at the age of five, which had caused deafness on the left side. Four years ago he had been put under treatment for "secondary" symptoms, and had since then received eighty injections of "salicyl-Hg" and thirty inunctions. In March, 1912, a papular eruption appeared in the mouth, and he was sent to Beck for an otological report before being given salvarsan. Examination showed: Both tympanic membranes slightly cloudy, no spontaneous nystagmus, left complete deafness, Weber to the right; Right Cv. 7 m., Whp. 4 m., Rinne positive, bone-conduction much shortened. No response to the caloric test (both hot and cold) left. Rotation to right ten times, nystagmus 12 seconds; to the left ten times, nystagmus 14 seconds. From this occurrence of compensation to rotation combined with the deafness and loss of caloric reaction on the left, it was concluded that the case was due to an old traumatic lesion of the left inner ear, and, since a slight affection of the cochlear nerve also existed on the right side, salvarsan, according to our experience, was contra-indicated. Unfortunately, however, it was

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reported that from an otological point of view there was no reason against the use of this drug, and on March 27, 1912, he was given an intra-venous injection. Fourteen days afterwards he returned to Beck with the statement that his hearing was much worse. Cv. was now reduced to $\frac{3}{4}$ m., whilst hardly any appreciation for Whp. could be detected. No improvement had taken place up to the present time.

Complete Bilateral Deafness and Loss of Vestibular Response following Influenza.—O. Beck.—A woman, aged thirty-two, who had had measles and whooping-cough as a child, but whose ears had in no way ever been affected, suffered from a sudden severe attack of influenza four years ago, during which she noticed one morning on walking that she was totally deaf, whilst giddiness was so intense that she could not stand. The giddiness gradually improved but the deafness persisted. The middle ear was normal both sides, but the loudest sounds could not be heard. No spontaneous nystagmus. Vestibular apparatus absolutely unresponsive to all stimuli on each side. No evidence of lues, Wassermann negative.

Polyneuritis of the Acoustic and Facial Nerves following Scarlet Fever.—E. Max.—A girl, aged fourteen, whose ears had previously been quite healthy, eight days after the commencement of the fever showed signs of facial paresis on the left side, and on examination a spontaneous perforation was discovered on both sides. Some days later she became deaf first on the left then on the right side. No giddiness, vomiting, malaise or nystagmus. Vestibular reaction very weak at first and then disappeared altogether. In four weeks continual bilateral tinnitus set in. Six weeks after the commencement of the illness the facial paresis was quite recovered and the left otorrhœa had ceased; the right aural discharge, however, had now only recently subsided. The vestibular nerves now showed a very weak reaction, but no improvement had taken place in the cochlear divisions.

No other cause for the lesion than the scarlet fever could be found, and the exhibitor considered that the bilateral affection, the rapid progress of the loss of function, the absence of giddiness, vomiting, nystagmus and persistent facial paralysis all corroborated the view that the solution was to be found in some toxic cause.

Old Fracture of the Base with Complete Destruction of Labyrinthine Function; Compensation; Isolated Peripheral Paresis of the Abducens.—Ruttin.—A man, aged twenty-three, four years ago was knocked down. There was bleeding from the right ear and nose. He was unconscious, had to lie in bed many weeks, was deaf on the right side, but has no definite recollection of giddiness.

Examination showed: Right ear, a peripheral patch of scar-tissue in the anterior superior quadrant of the tympanic membrane. Total deafness and complete loss of caloric response. On the other hand, after-rotation nystagmus was present and lasted ten seconds on each side. Complete peripheral paralysis of the right abducens, fundus normal; the nystagmus on this side, of course, only appeared within the limit of action of the internal rectus. Rotation with the head bent forwards induced a nystagmus of equal duration also on either side, that is, of ten seconds, so that compensation had taken place in this respect, but the induced vertical nystagmus showed the normal difference in duration, as he (Ruttin) had before pointed out, between the upward and downward directed movements.

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Glioma of the Left Cerebellum with Total Atrophy of the Left Cochlear and Vestibular Nerves.—Ruttin.—The patient had suffered with headache and giddiness for about one year. A tumour of the right lobe of the cerebrum had been provisionally diagnosed, since there was paresis and spasticity of the left upper and lower extremity, choked discs (the right side being more marked than the left), and an X-ray picture showed more opacity on the right side of the brain than the left. Ruttin, however, had regarded the lesion as situate in the cerebellum or cerebello-pontine angle, since there was total deafness and lack of caloric response on the left side and a coarse horizontal-rotatory nystagmus (of undoubted central character) was present on both sides. The mental condition did not admit of testing the pointing reactions. *Post-mortem* a glioma of the left cerebellar hemisphere was found. Sections were submitted showing complete atrophy of the left cochlear and vestibular nerves, and a normal condition of those on the right side.

Glioma of the Fourth Ventricle with Advanced Deafness and Loss of Vestibular Response on the Right Side.—Ruttin.—The otological examination afforded the following result: Tympanic membranes normal, almost complete deafness for speech, and much reduced range of perception for the middle forks on the right side. No caloric reaction right, prompt response left, accompanied with giddiness. Spontaneous horizontal nystagmus towards both sides, with vertical nystagmus upwards. During the induction of the caloric nystagmus towards the right the spontaneous horizontal nystagmus was unaffected. Pointing tests normal, typical deviation after aural irrigation. The otological diagnosis thus naturally pointed to an advanced probably central lesion of the eighth nerve. *Post-mortem* a glioma of the fourth ventricle tending towards and affecting the right cerebellum was found.

The otological condition was doubtless due to involvement of Deiter's nucleus. It was interesting to compare the sections of the petrous bone in this case with those of the one just shown, since here the cochlear and vestibular nerves at the internal meatus appeared to the unaided eye as quite intact.

Leidler was particularly interested in this case as he was at present occupied in the effects on spontaneous nystagmus and vestibular reaction in rabbits after experimental lesions in the posterior fossa. It would appear from this case, and also, perhaps, as the result of his at present incomplete observations, that a central lesion in this situation was possible which would destroy the function of the nerve without apparent injury of the nerve itself. He hoped later to be able to give a more definite report on this subject.

Alex. R. Tweedie.

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