Drs. GLOVER and SÉBILEAU (Paris).—*Hyoido-thyrotomy for a Confluent Papillomata of the Larynx in a Child, aged Thirteen.*

The child was operated upon and tracheotomy tube kept in for two months. On its removal the voice returned rapidly.

In the discussion which followed, it was shown that tracheotomy often cures papilloma by giving a rest to the larynx, although they are always liable to return.

THE GERMAN OTOLOGICAL SOCIETY.

Seventeenth Annual Meeting, Heidelberg, June 6 and 7, 1908.

President, PROF. VOHSEN, *in the Chair.*

Abstract of Proceedings by favour of PROF. KÜMMEL (*Heidelberg*); *translated by* DR. J. S. FRASER (*Edinburgh*).

O. KÖRNER (Rostock).—*The Conservative Treatment of Chronic Middle-ear Suppuration.*

It is only since the introduction of the radical mastoid operation that we have begun to speak of the conservative treatment of middle-ear suppuration, which includes all therapeutic measures that can be carried out through the natural passages—the external auditory meatus and Eustachian tube—even when these include surgical operations such as the removal of diseased ossicles. Nowadays every chronic middle-ear suppuration is not regarded as dangerous to life, because the radical operation—a sort of autopsy on the living—has taught us to recognise the difference between the dangerous and the harmless cases. For this reason we have given up the purely prophylactic indication for the radical operation, and only operate when the dangerous character of the suppuration is recognised. The signs which point to this have been stated in detail, and when these are not present the necessary treatment can be carried out through the natural passages.

Middle-ear suppuration may be confined to the hypo-, meso- or epitympanic cavities or may affect the mastoid antrum; the speaker mentioned the methods he employed in each case. Regular cleansing of the tympanic cavity by means of the tympanic cannula and syringe occupies the first place. It is of no great value to add an antiseptic to the water used for this purpose, but

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

hydrogen peroxide is of great use on account of its mechanical cleansing properties. Boric acid powder must be applied with care when the perforation is a small one—that is to say, only under medical supervision. Nitrate of silver and alcohol give good results when the swelling of the mucous membrane is marked.

The removal of diseased or useless (dislocated) ossicles makes the complicated middle-ear space more simple, and therefore more accessible, to all therapeutic measures. It is of great importance that nasal or pharyngeal suppuration should be cured, because they often give rise to fresh attacks of ear suppuration. It is also very important that, in addition to local treatment, the strength of the patient should be maintained especially in the case of anæmic children or those with enlarged glands. Salt baths or a stay at the seaside, with or without sea baths, often work wonders.

Prof. Scheibe (Munich).—*What are we to Expect from the Conservative Treatment of Chronic Middle-ear Suppuration?*

After defining the expression "chronic middle-ear suppuration," Scheibe stated that he had come to the conclusion that Bezold's boric acid treatment and the methodical use of the antrum cannula *do* prevent the occurrence of mastoid and cerebral complications in cases of chronic suppurative otitis media: This conclusion was based on minute statistical inquiry, to which he attributed great importance, though he knew that Professor Körner did not agree with him. The extensive personal experience of Bezold and Siebenmann proved that he (Scheibe) was right. The generally accepted position of Wilde regarding the uncertainty of middle-ear suppuration has lost its validity. If, in spite of continued efficient direct injections and insufflations, the fœtor of the discharge continues (that is, in only 1½ per cent. of 750 chronic middle-ear suppurations) the radical mastoid operation is advisable; the ossicles should not, however, be removed. Ossiculectomy through the meatus was not employed in a single case, because it is not free from danger and usually is unnecessary. By means of the statistics collected by Scheibe's pupil (v. Ruppert), we have for the first time a criterion by which other conservative methods of treatment can be judged.

In the discussion Thies (Leipzig) recommended the removal of the lateral attic wall in cases of chronic suppuration with affection of the attic and antrum which have resisted conservative treatment. The removal of the ossicles and tympanic membrane depended on the extension and position of the foci of disease. Cases with

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

external symptoms of disease of the mastoid process are excluded. The operation is performed under local anæsthesia according to Neumann's method. When the antrum shows signs of marked disease the adjacent part of the posterior bony meatal wall must be removed.

Dr. HEGENER (Heidelberg).—*Suggestions with regard to the Estimation of the Upper Tone Limit.*

The idea that the upper tone limit is about 50,000 V.D. (Schwendt, Edelmann) is incorrect; it really lies about 20,000 V.D. (Myers, F. A. Schulze, Hegener). The error arose from the fact that the Galton whistle, when blown by an indiarubber ball, produces a series of tones, the lowest of which was from one to two octaves lower than the fundamental tone of the whistle as measured by Kundt's tubes. These tones (cutting tones) in the determination of the narrowing of the upper tone limit lead to mistakes. To maintain a continuous pressure by blowing meets with decided practical difficulties; you are at the same time disturbed by the noise of the bellows, and the possibility of being misled by friction tones. For these reasons the Galton whistle is to be thrown aside. For a critical examination the newly-constructed monochord of Schulze is specially suitable; this instrument produces tones depending on the vibrations of stretched cords. Along with it tuning-forks or Melde's tone-plates may be used.

Dr. HEGENER (Heidelberg).—*Method for the Estimation of the Number of Vibrations of Soft High Tones, with Demonstration.*

The object of this method is to give a decidedly higher degree of sensibility than the tubes of Kundt, which have hitherto been usually employed. The idea is to avoid loss of power and provide a good indicator. Seebeck's tubes are used, and the place of the ear is taken by a very sensitive high-pressure flame. On account of the resonance thus produced, the delicacy even of Lord Rayleigh's method is markedly improved on, and its faults, due to the size of the flame and the heating of the air, are avoided; the accuracy is very great, and the method is purely objective.

Dr. BÁRÁNY (Vienna).—*Noise Apparatus to determine One-sided Deafness.*

The lecturer demonstrated the *patent* apparatus which had been

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

constructed by Reiner and Co. according to his suggestions; clock-work causes a hammer to strike a membrane, and the noise thus produced is conducted direct to the ear by means of an ear-speculum. It is not yet possible to ascertain with certainty one-sided deafness in all cases in spite of the excellent investigations of Bezold, even with a tedious and protracted examination. The lecturer has thought of the idea of excluding the sound ear by producing in it such a noise as to make it deaf to every other source of sound, so that it is now possible to examine the hearing capacity of the other ear alone. There is a theoretical objection to this method, in that the noise produced in the healthy ear may affect the diseased ear and so prevent the detection of slight hearing ability in the diseased ear; according to the examinations carried out by Bárány this is, however, not the case, and even quite minute remaining islands of hearing can be recognised. It is also possible in this way to distinguish total one-sided deafness from "vowel" hearing. The examiner must speak with a loud voice on account of the deafness of the ear he is investigating. A person with normal ears can hear conversation several yards away, and whispering at one yard at least; if, on the other hand, the ear to be investigated is totally deaf, the very lowest talking and noises are not heard at all. A double apparatus of this kind applied to a person with normal hearing makes him for the time totally deaf. This new apparatus is an improvement on one previously invented by Bárány, in that it is very handy and the noise produced is always of the same strength: the recognition of one-sided deafness can be attained in a few seconds with absolute certainty.

Drs. K. L. Schaefer and H. Sessous.—*On the Importance of the Middle-ear Apparatus for the Hearing, especially of the Lowest Notes.*

These investigators have examined seventeen patients on whom the radical mastoid operation has been performed on both sides, *i.e.* thirty-four ears; the lowest hearing limit was tested with the Edelmann forks; with a few exceptions this lower limit lay in the large or contra-octave. As it has already been proved that middle, high, and the highest notes are heard by patients who have had the radical operation, we may conclude that on the whole the hearing of tones is relatively little affected by the want of the middle-ear apparatus as far as qualitative relations are concerned; it is quite a different matter with respect to quantity, as is proved by general experience, and specially by the former experiments of F. Wagner.

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

When the tympanic membrane and chain of ossicles are wanting the duration of hearing for single tones is the more shortened the lower the tone.

Dr. WANNER (Munich).—*Functional Examination in Cases of Congenital Syphilis.*

Bezold has proved in his work "Die Taubstummheit Auf Grund Ohrenärztlicher Beobachtung" that, among 233 cases of acquired deaf-mutism, 13 (5·6 per cent.) were due to congenital syphilis. According to his examinations difficulty of hearing shows itself either between the seventh and eighth or between the eleventh and twelfth years. All the patients, with one exception, showed signs of previous eye disease. The third member of the Hutchinson triad—the Hutchinson's teeth—were present in many cases. In the course of years Wanner has examined fifteen further cases which were recognised according to Bezold's symptom-complex as arising from congenital syphilis. The patients were tested with the Bezold-Edelmann tone series. Five of the patients were tested on several occasions both before and after anti-syphilitic treatment; in three cases there was some improvement, while in the two others, after a temporary improvement, marked deterioration took place. The results were demonstrated by graphic representations, and gave a clear picture of the affection of the inner ear in cases of congenital syphilis.

The majority of the patients were females—two boys to five girls. This preponderance of the female sex is the more remarkable when one considers that among ear patients in general four females suffer as compared with six males, whereas in this form of ear disease fifteen females were affected and only six males. The occurrence of the deafness takes place suddenly as a rule—within the course of a week or a month; while the ages mentioned above are the most common for the occurrence of the disease, it cannot be excluded up to the age of twenty. Syphilitic disease of the eye occurs in almost all cases three or four years before the disease of the ear, and the results, usually corneal opacities, are easily recognised.

Sometimes along with the occurrence of the ear disease we meet with relapses of the disease in the eye. Hutchinson's teeth are present in about 50 per cent. of the cases. Tinnitus and giddiness are proportionately seldom noticed at the beginning of the ear disease in addition to deafness. The history of the patient, if it can be obtained, lends weighty support to the diagnosis, *e.g.*

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

history of the disease in the parents, premature or still births, stigmata of syphilis at or soon after birth.

Otoscopic examination frequently shows the picture of closure of the Eustachian tube and leads to a wrong diagnosis if accurate tests of the hearing distance for whispered speech be omitted. In cases of uncomplicated tubal closure the number 9 ("neun") is very frequently badly heard, whereas in these cases (congenital lues) the numerals 4, 6 and 7 ("vier," "sechs," "sieben") are more difficult to pick up. After the use of Politzer's method the hearing distance in the one case returns to normal, but in the other is very little improved.

The functional examination gives, as a rule, the picture of disease of the inner ear—normal or somewhat narrowed lower tone limit, marked shortening or loss of bone conduction, great defect of the upper tone limit, positive Rinne. In the qualitative test we also meet with gaps in the scale not infrequently.

The prognosis is doubtful and the treatment not very encouraging; an anti-syphilitic course of treatment should be begun as soon as possible—potassium iodide and mercury by inunction by preference. Most important of all is the preservation of speech, which would otherwise be lost in a remarkably short space of time, so that by the age of fifteen or eighteen the patient can no longer be understood. Since the children at the time of the illness can speak perfectly well they need only retain this power, and for this reason they should as soon as possible enter the hearing class of a deaf-and-dumb institution.

Prof. DENKER (Erlangen).—*Demonstration of Three New Ear Models.*

(1) In the first the whole organ of hearing was demonstrated by means of a vertical section from without inwards, showing the complicated shape of the external meatal passage; the section next turns forwards along the long axis of the Eustachian tube, leaving the drum membrane intact. The whole middle-ear tract with the ossicles is thus easily seen. The section also shows the cochlea (opened) as it lies in relation to the median wall of the tympanic cavity, the vestibule and semi-circular canals, and the internal auditory meatus with the auditory and facial nerves.

(2) The second model is a corrosion preparation, seven times enlarged, and shows the form of the cavities of the whole organ of hearing in a most excellent way.

(3) The third demonstrated the tympanic cavity twenty times

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

enlarged; this model can be taken to pieces so that one can study the formation of the outer and inner wall.

Prof. Schönemann (Bern).—*Demonstration of Five Flat Models of the Human Ear, fifteen times enlarged.*

Prof. Politzer (Vienna). — *The Anatomical Condition of the Foot-plate of the Stapes in Oto-sclerosis.*

Politzer demonstrated a number of histological preparations from cases of oto-sclerosis which had been observed during life; the extension of the bone disease of the labyrinth capsule to the stapes was shown in its various stages. Several of the sections through the labyrinthine capsule and stapes-plate can lead to the false conclusion that the oto-sclerotic changes develop primarily in the foot-plate itself. Serial sections of these preparations show, however, the immediate connection of the bony change with that in the labyrinth capsule. The preparations show, further, that oto-sclerosis consists not in a change of the normal bony tissue in the labyrinth capsule, but in a real new formation which displaces the normal bony tissue and often proliferates over the surface of the labyrinth capsule. This bony proliferation is specially marked where it spreads to the stapes-plate, which is often replaced by a bony mass as the preparations show.

Politzer demonstrates other specimens which conclusively proved that in cases of typical clinical oto-sclerosis we have to do with a primary disease of the labyrinth capsule; this is contrary to the statements of Habermann, who regards the bone changes as proceeding from the periosteal layer of the mucous membrane.

Politzer gives the following reasons for his opinion:

(1) In no case, in which the site of the disease was the wall of the promontory, did the spread of the process take place from the periosteal layer towards the deeper parts, but, on the contrary, the bone disease, where it does not occur as a circumscribed island in the labyrinth capsule, extends to the whole thickness of the promontory wall.

(2) Because Politzer, Jörgen, Möller, and Lindt have found circumscribed, sharply bounded, newly-formed centres of ossification in the labyrinth capsule, between which and the periosteum a normal bony layer existed. Manasse also in one case found on both sides an isolated, newly-formed bony deposit in the internal meatus.

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

(3) Finally, Politzer on histological examination of the typical form of the disease never found the slightest changes in the mucous membrane of the middle ear or in its periosteal layers.

Dr. Brühl.—*Microscopical Demonstration on Oto-sclerosis.*

The specimens were from an extremely deaf female, aged sixty-three. There was a fixation of the stapes due to a spongification centre in the promontory wall, but the middle ear was otherwise normal; a second centre existed in the wall of the internal meatus.

Dr. Yoshii (Tokio) and Prof. Siebenmann (Basel).—*Demonstration of Experimental Injuries of the Organ of Hearing.*

The microscopical preparations, which were exhibited by means of the projection apparatus, were obtained from guinea-pigs which had been exposed to—(1) Various high notes (whistle); (2) tin-plate drum sounds; (3) detonation. The changes due to whistle-notes affected Corti's organ as well as the ganglia and nerves in connection with it: they occur lower in the cochlea the higher the tone is. The syren with a range of tone from f. 3 to f. 4 injures the whole cochlea after even a short trial. The most marked changes were produced by shooting—a single shot with a child's pistol and caps fired close to the ear can shatter Corti's organ, cause varicose deformities of the nerve, and shrinkage of the ganglion cells. The vestibular apparatus is also affected in this last experiment.

Prof. Siebenmann (Basel) and Dr. Yoshii (Tokio).—*Specimens of Circumscribed Labyrinthitis.*

These were from the cochlea of a guinea-pig. The basal and apical turns were affected by inflammation due to middle-ear suppuration, but the two turns in the middle of the cochlea were normal.

Dr. Ferdinand Alt (Vienna).—*Demonstration of Microscopic Preparations of Labyrinth Suppuration and its Results after Epidemic Cerebro-spinal Meningitis.*

The first specimen was from a boy, aged sixteen, whose illness had only lasted nine days: the preparation showed the condition of interstitial purulent neuritis of the cochlear, vestibular and facial nerves, as well as a recent purulent inflammation in the cochlea, vestibule and semi-circular canals and inner wall of the tympanic cavity.

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

The second was from a young man, aged eighteen, who died after an illness lasting sixty-seven days: the specimen showed the result of a purulent inflammation of the labyrinth with almost total destruction of the membranous labyrinth and new formation of connective tissue rich in blood-vessels: in some parts the specimen showed early ossification of this tissue in the cochlea, vestibule and semi-circular canals, while in others the ossifying process had become complete.

The third specimen was from a workman, aged twenty-one, who died after an illness lasting sixty-one days: the purulent infiltration had not left such characteristic traces as in the former case, but there was complete destruction and fibrous degeneration of the nerve end-apparatus in the whole labyrinth.

Dr. Marx (Heidelberg).—*The Injury Inflicted on the Labyrinth by the Influence of Rays.*

After a single application of radium for a period of one hour to the ear-labyrinth of pigeons, symptoms of labyrinthine affection appear after a latent period of six months. The microscopic investigation showed that these changes were due to a degeneration of the sensory epithelium of the maculæ and crista acoustica. No other changes could be proved. Marx suggested that therapeutic use might be made of this result in cases of vestibular disturbance.

In guinea-pigs application of the radium rays resulted in degeneration of Corti's organ; there was also a proliferation of connective tissue and bone at the apex of the cochlea, but this is probably to be attributed to mechanical injury. Experiments with X rays, which have not yet been concluded, have hitherto given no definite results.

Dr. E. Ruttin (Vienna).—*Dilatation of the Ductus Cochlearis.*

He demonstrated preparations to illustrate this subject, and stated that in these cases there was a slowly-spreading inflammation ("induced labyrinthitis") through the labyrinth wall which produced typical changes in the membranous labyrinth. The dilatation affects the entire ductus cochlearis in apparently all cases, but in microscopic preparations one sees only the dilatation of the first half of the basal turn, because Reissner's membrane stays in its position of dilatation in this turn alone through the exudation sinking down from the inner side of the labyrinth wall, and later on becoming organised. In contrast to this "induced

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

labyrinthitis," Ruttin found that, in cases of ordinary suppurative labyrinthitis, where the route of entrance of the suppuration could be seen, the membranous cochlea was always destroyed.

Dr. F. R. Nager (Basel). — *The Formation of Labyrinth Sequestra in Cases of Middle-ear Carcinoma.*

This demonstration was illustrated by coloured (Lumière) lantern plates.

The specimens were from a patient, aged eighteen, whose family history was bad. In youth he had suffered from middle-ear suppuration with cholesteatoma, and on this a squamous epithelioma had formed. In spite of several operations death occurred ten months later. On histological examination it was found that there were several points of entrance of the disease into the vestibule and semi-circular canals. In the cochlea there was an extensive chronic fibrous and ossifying labyrinthitis; this is not specific for carcinoma, but from these appearances one would come to the conclusion that a labyrinth inflammation had been overcome. It is not easy to say with certainty whether these appearances were due to the ear trouble in youth or were an indirect effect of the carcinoma. Though the sequestrum had not as yet become quite dead—the blood contents and straining reaction of the cell elements were relatively good—this observation proves that carcinoma, like tuberculosis or cholesteatoma, can give rise to partial or complete sequestrum formation of the labyrinth. Up to the present time no identical observation has been recorded.

Dr. Hugo Frey (Vienna).—*Microscopic Preparations of Malformations of the Organ of Hearing.*

These were from cases of anencephaly.

Prof. Denker (Erlangen). — *Model showing the Mechanism of the Ossicles (made by Edelmann).*

Dr. Voss (Frankfurt a. M.).—*Clinical Observations on Non-purulent Inflammations of the Labyrinth in the Course of Acute and Chronic Middle-ear Suppurations.*

This speaker gave, first of all, an historical review of the question of the division of labyrinth inflammation due to middle-ear suppuration, into those of a purulent and non-purulent nature; he then reported a series of personal observations bearing on this point, *i.e.* serous labyrinthitis in connection with acute and chronic middle-ear suppuration.

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

Voss comes to the following conclusions:

(1) Labyrinth inflammations occurring in the course of genuine acute middle-ear suppuration, which is not of a scarlatinal or tuberculous nature, are usually of a serous and not of a purulent nature.

(2) They occur as circumscribed or diffuse inflammations, *i.e.* they affect part of the labyrinth or the whole of it.

(3) The diagnosis as to which of these two kinds is present in a particular case makes it necessary that the functional examination should be carried out by all the latest modern methods for testing the acoustic and static labyrinth.

(4) The differential diagnosis between a diffuse serous and a diffuse purulent labyrinthitis in cases of acute middle inflammation can be made, because the diffuse serous labyrinthitis comes on almost at the same time as the middle-ear inflammation, and runs a rapid course and has a favourable result.

(5) The differential diagnosis between a circumscribed serous (labyrinthitis) and circumscribed purulent labyrinthitis is made in the same way; in the serous form the function of the organ is restored to normal, and the fistulæ found in other cases are absent.

(6) As far as function is concerned, the circumscribed serous form must be regarded as favourable, and the diffuse form as unfavourable.

(7) In regard to life, both forms are equally favourable.

(8) Healing of these labyrinth inflammations proceeds parallel with the healing of the middle-ear suppuration.

(9) It must therefore be our object to cure the middle-ear condition by operating at once on a case of mastoiditis, so as to prevent permanent changes in the delicate membranous and nervous structures of the inner ear.

(10) Nothing can be expected from a mastoid operation only performed for the purpose of relieving the functional disturbances due to serous labyrinthitis.

(11) In connection with the radical operation we meet with symptoms of labyrinth irritation without any labyrinthine fistula or operative injury (such as stapes displacement or injury of the semi-circular canal) having occurred.

(12) These symptoms are due to serous labyrinthitis, which is probably produced by infection by way of the membranes in the round and oval windows.

(13) The manipulations on the labyrinth wall are probably the cause of this condition.

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

(14) Apparently there is the question in these cases of diffuse and circumscribed inflammatory processes.

(15) The differential diagnosis is made by the functional examination of the acoustic and static labyrinths.

(16) These conditions are diagnosed from coarser traumatic lesions, because they occur only after from fourteen to twenty-four hours after the operation—not at once. They also reach their climax only a few days after the operation, and, as a rule, end more quickly than the symptoms after injury of the labyrinth.

(17) They can be distinguished from purulent infections of the labyrinth by the mode of onset which has been described, by the absence of fistula in the labyrinth wall, by the absence of fever, and because they end with re-establishment of function.

(18) As regards the function of the organ and life of the patient the prognosis is favourable.

(19) The treatment must be purely expectant.

E. Bloch (Freiburg i. B.).—*The Ætiology of Stapes Ankylosis.*

After a cursory reference to the principal causes of "*hyperostosis of the labyrinth capsule*" that have been hitherto advanced, the lecturer reported a case of inheritance of this condition. In two generations of a large family he had found six cases of this condition as proved by functional examination. The first of these cases died soon after the last examination, and the clinical diagnosis was verified by anatomical and histological examination.

Manasse (Strassburg i. E.).—*Exostoses of the Internal Auditory Meatus (with demonstration).*

The specimens shown were from a female, aged eighty-three. On the left side the upper boundary of the internal auditory meatus presented two thick protuberances, and the new formation extended as far as the sinus; on the right side the swelling was larger, but did not extend so far outwards. Microscopically it consisted in parts of ivory-like bony tissue, in other parts of spongy bone with marrow spaces; the tympanic cavity, external meatus and labyrinth were not affected.

Dr. E. Ruttin (Vienna).—*The Surgery of the Temporal Bone.*

The case reported was one of subacute purulent otitis with fistula in the lower bony meatal wall and labyrinth, and deep extra-dural abscess. Ruttin completely extirpated the pyramid in order to reach absolutely healthy tissue. He showed that the danger of hæmorrhage, injury of the brain and meningitis was

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

absolutely *nil* in this operation, and that ear surgery must not stop short of the carotid canal. Ruttin also mentioned that Bárány had used a similar method for the removal of tumours of the auditory nerve on the cadaver.

Dr. Ferdinand Alt (Vienna).—*The Operative Treatment of Otogenic Facial Paralysis.*

The paralysed facial nerve exhibits a remarkable capacity for regeneration; we see cases of facial paralysis, which have occurred as the result of middle-ear suppuration or the radical operation, clearing up after more than a year, but there always remains a small proportion of cases which, in spite of diligent conservative treatment, show no tendency to recovery. In such cases anastomosis between the facial and spinal accessory or hypoglossal has been recommended.

One and a half years ago Alt performed the radical operation on a child, aged seven and a half; the whole bony labyrinth could be removed as a sequestrum. For the treatment of the facial paralysis a facio-hypoglossal anastomosis was carried out with a satisfactory result: active movements again occurred in the forehead, eyelids and mouth, and electric excitability also returned. This nerve-grafting brings up the question as to whether a simpler method of dealing with such cases as the above cannot be discovered so as to obviate the injury of another cranial nerve. When a patient has middle-ear suppuration along with a facial paralysis that has lasted for weeks or months, Alt carries out the radical operation in the following way: He pays great attention to hæmostasis so that the field is not obscured by bleeding. After cleaning out the attic and antrum he renders the tissues anæmic by the free use of adrenalin, and lays bare the Fallopian canal in order to discover any abrasion of the bony wall; he next opens the facial canal centrally and peripherally from the region of the casing of the nerve in the tympanum, cleans the canal and the nerve from all adherent granulations or compressing cholesteatoma, and finally replaces the nerve in the semi-canal thus produced. In cases of post-operative facial paralysis he performs the same operation if, at the end of six months, there is no return of active movements or electric irritability in spite of the usual measures. Alt explained his method of operation, which was followed by prompt diminution of the appearances of paralysis. A specially favourable result was obtained in a case of facial paralysis which had existed for four years; the first operation had been performed

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

elsewhere. Alt freely exposed the facial nerve in the horizontal and vertical part of the Fallopian canal and found that it was not divided, but that, in the horizontal part, it was not surrounded by bone, but embedded in a tense mass of scar-tissue. During the operation Alt was unwilling to admit that the paralysis had been due to this embedding of the nerve alone, but the further course of the case proved that this was the case as the paralysis passed off in a remarkably short period.

Dr. Lindt (Bern).—*A Case of Tuberculosis of the Nose in an Uncommon Position.*

The patient was a young man who had had syphilis four years previously, but had been treated and declared to be cured. In the posterior third of the right inferior meatus there was a soft, flat swelling, which looked like granulation tissue on the wall of the antrum and partly on the inferior turbinal; there was a defect in the wall of the antrum at this point, but no inflammation of the surrounding tissue, no sequestrum formation, and no fœtor. The patient could not stand potassium iodide, nor did this drug lead to any improvement. A cure was obtained by operation. Microscopical examination showed granulation tissue, round foci of epithelioid cells free from blood-vessels, and typical giant-cells, but no syphilitic changes in the blood-vessels. It must also be noted that the patient had a slight affection of the right apex, and reacted positively to the cutaneous tuberculin test.

Dr. Marx (Heidelberg).—*Demonstration of Osteomata of the Accessory Sinuses.*

(1) Osteoma of the sphenoidal sinus: The patient was a male, aged thirty-five, who for four years had suffered from increasing exophthalmos. Three days before the operation there was the sudden appearance of an orbital phlegmon with high fever. At the operation a long tumour nearly 7 cm. in length was removed from the orbital cavity. The eye was carefully guarded during the operation. The case progressed favourably, though there was some temporary diminution of the field of vision, due to traction during the operation. The power of vision was somewhat better after the operation ($\frac{1}{5}$). Movements of the eye quite good; no spontaneous diplopia. Cosmetic result also satisfactory.

(2) Osteoma of frontal sinus: Female, aged twenty-eight; proptosis for ten years. Marked emphysema of the conjunctiva

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

occurred suddenly during the act of blowing the nose some days before the operation. At the operation a 3·5 cm. tuberculated tumour was removed and found to be in connection with the floor of the frontal sinus. Further course and cosmetic result good; eye not injured; no diplopia.

(3) Ethmoidal osteoma: Male, aged eighteen; 3 cm. sclerotic tumour removed from the region of the anterior ethmoidal cells; course and results good.

Dr. Uffenorde (Göttingen).—*Two Cases of Sub-dural Abscess (with demonstration).*

The first case was one of sub-dural abscess of the middle cranial fossa complicated by extra-dural and left temporo-sphenoidal abscess; the case recovered. The brain abscess lay some distance from the suppurating middle ear. As exciting factors there are not found the absolutely anaërobic saprophytes which are recognised by others by means of the fœtor and the marked purulently infiltrated marginal zone of encephalitis with the resulting copious detritus. Uffenorde demonstrated and recommended the use of wide glass drainage tubes in these cases; the tubes are bent at a right angle and contain narrow selvedge iodoform or vioform gauze. The aphasic disturbances continued for a long time, but otherwise the case exhibited no special symptoms.

(2) In the second case only the smaller focus lying above the tegmen tympani et antri could be opened up by means of a cruciform incision. Typical symptoms were not observed in either case, but the pathological and anatomical findings were the same in both, viz. a marked yellow staining of the smooth, shining, and imperforated dura mater. The arachnoid, which was covered with granulations, was preserved. In the second case a larger focus was found *post-mortem* above the occipital lobe, and histological preparations of this were shown along with a macroscopic preparation of the brain. The cause of the infection was the *Streptococcus mucosus*. Shortly before death a leptomeningitis had occurred.

Dr. Fr. Müller (Heilbronn).—*A Wound Clip for Ear Operations.*

Prof. Hartmann (Berlin).—*Closure of Retro-auricular Openings by backward Displacement of the Auricle.*

When an operation has led to a retro-auricular opening the auricle itself is displaced forwards and outwards and the opening is

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

on the uncovered surface of the mastoid process; to close the opening the auricle must be once again replaced.

This is done as follows: The scar surface is excised in such a way as to obtain an oval wound surface with the ends pointing upwards and downwards; in the middle of this surface lies the retro-auricular opening. The two ends of the oval surface must reach beyond the upper and lower limit of the attachment of the auricle, and the anterior and posterior wound boundaries must be equally far away from the anterior and posterior boundary of the retro-auricular opening. The edges of the wound are united by stitches, and, if necessary, part of the posterior meatal wall must be removed. By this means a free entrance to the tympanic cavity is obtained and any disfigurement is avoided.

Dr. Voss (Frankfurt a M.).—*Salpingoscope with Arrangement for Catheterisation and Passage of Bougie.*

Dr. Voss has had an arrangement fitted to Valentine's salpingoscope in order that a catheter or bougie may be passed with the aid of vision; the principle of the cystoscope has been followed, and with the aid of the new instrument one can observe the introduction of the bougie or catheter into the pharyngeal orifice of the tube and give them the desired direction.

Prof. KRETSCHMANN (Magdeburg). — *Operative Treatment of Deformities of the Nasal Septum.*

This speaker demonstrated on a preparation a new method of septum resection, which he had used several times. The upper lip is turned up and an incision is made down to the bone at the junction of the gum and mucous membrane of the lip, from the level of one canine tooth to the other. The upper flap is elevated from the bone till the lower boundary of the pyriform aperture appears. One next goes round this boundary with the elevator and raises the mucous membrane on both sides as well as the mucous membrane of the septum. The loosened mucous membrane is then retracted with blunt instruments and the septum lies denuded, so that one can carry out the necessary operation. At the end of the operation the soft parts are replaced; stitches are not absolutely necessary. A slight rise of temperature and some swelling of the face usually follow within the next few days. This operation gives good access. It often happens that the anterior nasal spine and incisor crest are enlarged by exostosis and must be corrected; it is sometimes necessary also to chisel the nasal bone.

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

Dr. UFFENORDE (Göttingen).—*Pathological and Bacteriological Researches in a Case of extensive parietal Lateral Sinus Thrombosis (with demonstration).*

Dr. Uffenorde reports a case of parietal thrombosis which was due to erosion of the sigmoid sulcus; the thrombosis spread in the wall of the lateral sinus peripherally and centrally so that it extended from the superior longitudinal sinus to the internal jugular vein. At the operation the parietal thrombus was so firm that it was mistaken for the median wall of the lateral sinus as thickened by phlebitis, and the fact was overlooked that the median half of the sinus contained blood. A firm tamponade between the lateral wall of the sinus and the bone did not diminish the flow of blood. The patient suffered from bronchitis (blennorrhagic), and this made it difficult to explain the physical signs in the lungs, so that it was only when rigors and blood-stained sputum were observed that the correct diagnosis of metastatic hæmorrhagic infarction could be made, and the sinus further operated on; previously the lung condition had been looked on as one of broncho-pneumonia complicating the already existing bronchitis. It took several operations to perform the complete bulb operation according to Grunert, on account of interruptions due to heart weakness and other circumstances. The increasing metastases were, however, not stopped even by this operation, so it was evident that the transverse sinus of the other side was conveying the infecting emboli. Infection of the peripheral part of the transverse sinus could not be thought of, on account of the parietal thrombus condition found by the Meier-Whiting method as well as on account of the normal condition of the outer sinus wall—a sign which again proved in this case to be very treacherous. A very large posterior emissary condylar vein was an anatomical abnormality in this case, and interrupted the bulb operation by causing profuse hæmorrhage. At first this vein was looked upon as the carrier of emboli which had rendered nugatory the ligature of the jugular vein. The infective agent was found to be a Gram positive mobile bacillus, but closer identification was not possible. Their position corresponds to the peri-vascular position observed by F. Fränkel in the case of *B. pyocyaneus*. The lecturer made a further valuable contribution to the question of parietal thrombosis by giving details of a fatal case which had been minutely investigated from a pathological, anatomical and bacteriological point of view. The case was one of streptococcus infection in which there was parietal thrombosis

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

with septico-pyæmia and metastases in the joints and soft parts; there was no mastoid tenderness or swelling.

Uffenorde thinks we must accept four different modes of onset of the general infection and gave examples:

(1) Obturating thrombosis—specifically but not exclusively in cases of virulent infections.

(2) Necrosis of the sinus wall and entrance of bacteria from the neighbouring suppurative foci into the blood-current.

(3) Parietal thrombosis when the organism is less virulent, or, even when the organism is virulent, if a protective layer has previously formed on the sinus wall. In these cases complete organisation eventually takes place with softening or re-canalisation of the parietal or obturating thrombus.

(4) Direct entrance of bacteria and toxin into the blood from the suppurating tympanic and adjacent cavities without a thrombo-phlebitic process in the sinus. The bacteria get secondarily into the thrombus. Histological demonstrations were given of parietal thrombosis of the sigmoid sinus and internal jugular, of the laminated thrombus of the peripheral transverse part with special staining for bacteria and fibrin.

Dr. Ernst Urbantschitsch (Vienna).—*Favourable Results of Galvanic Treatment in Cases of Difficulty in Hearing, with Demonstration of a Galvanic Apparatus for Self-Treatment.*

The speaker described the favourable results of galvanism in dulness of hearing and subjective noises, and demonstrated them by means of tracings. He showed also a small galvanic apparatus for the patient's own use.

Prof. Kirchner (Würtzburg).—*Demonstration of a Stand for Operative Practice on the Ear.*

Dr. Herschel (Hälle a. S.).—*Demonstration of the Decalcification Process in the Petrous Temporal Bone by Means of X Rays.*

The X rays are used to show how the decalcification process is progressing: unless these rays are used one has no absolutely certain criterion of the total decalcification: the rays show distinctly even the most minute traces of embedded lime salt, and show with certainty the moment when the bone is totally decalcified and ready for further histological processes.

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press

Dr. HEGENER (Heidelberg).—*Demonstration of Thin Celloidin Sections through the Temporal Bone.*

In order to get thin celloidin sections (10 μ) from this hard bone one must pay attention to—(*a*) the embedding—protracted infiltration with very thin celloidin with use of a vacuum; (*b*) the block form; (*c*) avoidance of any want of firmness in the object and knife-cuts (new microtome of Jung); (*d*) the shape of the knife; (*e*) formation of the blade; (*f*) temper of the steel; (*g*) the alkaline reaction of the alcohol used for moistening the specimen, etc.

The suggestions are useful in neurological research and photomicrography.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Thirtieth Annual Meeting held at Montreal, May 11, 12, and 13, 1908.

(By courtesy of the *Medical Record.*)

DR. HERBERT S. BIRKETT, *of Montreal, President.*

MONDAY, MAY 11—FIRST DAY.

President's Address.

Dr. BIRKETT delivered this address, taking as his subject "The History of Medicine in the Province of Quebec."

Removal of Foreign Body from the Trachea.

Dr. J. H. BRYAN reported a case of a grain of corn removed from the trachea of a six-year-old child. Several days before admission to the hospital he had inhaled the grain with the usual suffocative symptoms following, but these all quieted down and it was supposed that the body had escaped the air-passages. Returning attacks of dyspnœa seemed to disprove this assumption, but after admission to the hospital a careful examination and a radiograph failed to reveal anything definite. Later respiratory signs were absent over the right lung, but in a few hours air seemed to be entering freely on this side. Several ineffectual

https://doi.org/10.1017/S1755146300181466 Published online by Cambridge University Press