

Abstracts

one-grain iodoform pill for a few days and then be treated with large doses of potassium iodide. There was a possibility, however, that the case might be one of chronic glanders. He (the speaker) had seen one such case which behaved as this one had done. It was seen by at least fifty competent laryngologists who all diagnosed tertiary syphilis. The Wassermann reaction was always negative and anti-specific treatment had no effect. At the end of two years the patient died, and at the post-mortem typical changes were found in the spleen and the glanders bacillus was isolated and cultured. He suggested that the possibility of this case being glanders be kept in view.

Dr HALL said he was very grateful to Dr Harper for these suggestions. The case would be investigated from the point of view of glanders.

The PRESIDENT reported upon a case which he had shown last November in Glasgow. A case of urticaria which had cleared up after enucleation of the septic tonsils. The patient had a return of the urticaria after fourteen months, just as bright and brilliant as ever. He happened to mention the case to Dr Adam who said "Give her a blue pill." She had had three or four blue pills and there had been no return.

ABSTRACTS

EAR

Lumbar Puncture Diagnosis of the Cerebral and Subdural Abscesses.
G. V. Th. BORRIES, Copenhagen. (*Annales des Maladies de l'Oreille*, Tome xlvii., s. 452.)

The quality of the spinal fluid in cases of cerebral abscess varies greatly. From the quite normal, clear, and sterile fluid we have all stages to the highly turbid and bacterial.

The following four types of spinal fluid may be distinguished :—

- I. The quite normal fluid in the cases of abscess without any complicating active leptomeningitis.
Less frequent type.
- II. The clear sterile liquor, containing cells by microscopic examination, found when the abscess is complicated by a "minimal" (microscopic) leptomeningitis.
Frequent type.
- III. The turbid liquor, presenting a "benign type" in the abscess, complicated by a "minimal" (microscopic) meningitis or a light macroscopic meningitis. Numerous cells, mostly lymphocytes, but in some cases a transitory polynucleosis may be seen. In most cases the fluid is sterile, but bacteria may be present.
Frequent type.

Ear

- IV. The turbid fluid, presenting a "malignant type" in the abscess, complicated by a diffuse purulent meningitis. Numerous polynuclear cells and microbes, especially in the terminal phases.
Type a little less frequent.

Type II. and III. are most frequent. In some cases the characteristic "dissociation" between the benign course of the liquor symptoms and the malignant course of the other clinical symptoms may be the only chance of differential diagnosis between abscess and uncomplicated meningitis.

If the type I. or II., or a light degree of type III. occurs in a patient, who has already for some days shown pronounced cerebral symptoms, in most cases an abscess is present.

AUTHOR'S ABSTRACT.

Constitutional Deafness: (1) Definition; (2) Elevation of Lower Tone Limit—A New Conception. MARK J. GOTTLIEB. (*Laryngoscope*, Vol. xxxviii., No. 5, p. 306.)

Previously, the word otosclerosis was applied to a form of deafness which progressively became worse and presented the usual signs and symptoms. Quite often one found that a case which was typically otosclerosis in life showed post-mortem no disease, either in the bony capsule or in the membranous labyrinth. The only symptoms which are invariable are the elevation of the lower tone limit and negative Rinné. It follows, therefore, that progressive deafness is not a distinct entity, but may be subdivided into various groups, which have a similar symptomatology, but which on careful study are found to have a different pathology. Kopetzky shows that the majority of cases of progressive deafness show a high or low calcium content and a high uric acid figure, which suggests that these cases of deafness are a manifestation of a general disease. It is not suggested that all cases of progressive deafness are constitutional; a certain proportion are undoubtedly due to local pathology, but again undoubtedly a proportion may be classified as constitutional; and the fact that a group of cases showed a contraction of the visual fields for form and colour supports this view. The diagnosis of constitutional deafness is postulated on the following findings:—(1) Elevation of the lower tone limit; (2) Negative Rinné; (3) Abnormal blood chemistry figures; (4) Progression; (5) Contraction of the visual fields for form and colour. In the toxæmias of the optic nerve the central fibres are affected first, causing contraction of the peripheral field; it is argued that the eighth nerve may suffer in the same manner. The author does not believe that the central fibres of the auditory nerve are particularly sensitive to

Abstracts

the effect of certain toxins, but thinks that the circulation of the cochlea is such as to make the central fibres more valuable. According to Denjiro Nabeya, three different types of circulation occur in the human cochlea, and diagrams illustrate these differences, which may determine the etiology of the loss of the lower tones in constitutional deafness.

ANDREW CAMPBELL.

New Histopathological Findings in the Ear in Lues and their Importance in the General Pathology of the Ear. GUSTAV ALEXANDER. (*Laryngoscope*, Vol. xxxviii., No. 5, p. 295.)

In the earlier studies of the histopathology of the ear, it was believed that the many characteristic findings for the various congenital and acquired diseases were known. With increasing knowledge we find that pathological changes, which we thought were purely congenital, may be found in acquired diseases, and it is also possible to produce changes artificially which in previous days we would have labelled congenital. It was also observed that changes seen in otosclerosis might exist in cases of congenital deafness as well. These findings lead the author to believe that the basal changes in otosclerosis may really be congenital.

A number of changes believed to be pathological were proved to be artifacts, whereas, a number of what we considered to be artifacts were shown to be actual pathological lesions—for instance, Nager and others believed corpora amylacea found in the eighth nerve were artificial products; whereas, Obersteiner and Alexander have shown that this is not so.

It is an interesting fact that no sufferer from Paget's disease has normal hearing. The deafness may be due to the stretching of the eighth nerve, changes of the bone in the region of the internal meatus, and in the endolymphatic sac and vestibular apparatus. In cretins fatty tissue was found filling the round window and other parts of the middle ear, fat marrow in the bone, and sometimes otosclerotic changes in the inner ear capsule, with atrophy of the nerve apparatus of the internal ear.

Pathological changes in six cases of acquired lues are described fully, and all these cases were examined clinically during lifetime. The changes in lues were similar in many ways to those caused by other diseases in the inner ear. Fatty tissue is found in lues and also in cretinism; atrophy of Corti's organ and the nerve ganglion apparatus in many cases of lues is equivalent to changes of the inner ear typically caused by arteriosclerosis. The findings of complete or incomplete closure of the cochlear aqueduct in lues are the same as those found in choked labyrinth caused by brain tumour. The findings of a gumma in the inner ear capsule in lues resemble the

Ear

changes in otosclerosis. It is possible that otosclerosis may be caused by lues. In future the author intends to use antiluetic treatment with neosalvarsan and mercury, and also the malaria treatment of Wagner, in cases of otosclerosis. The same treatment may be tried as a prophylactic in children with a positive hereditary history of otosclerosis. Pregnant women with otosclerosis may be treated with the object of preventing further loss of hearing, or the development of an ear organ of low resistance may be prevented in the embryo.

The treatment should be given at the earliest opportunity after a diagnosis is established.

ANDREW CAMPBELL.

A New Method of Determining Unilateral Deafness and Malingering.

JOHN GUTTMAN. (*Laryngoscope*, Vol. xxxiii., No. 10, p. 686.)

The usual methods of estimating the degree of deafness in one ear by the use of speech, tuning-fork, and audiometer, are not always successful, as the exclusion of the normal ear is very difficult, even with the Bárány apparatus.

The author's method is founded on a physiological fact, that during the perception of one sensation a second sensation can be perceived contemporaneously only when the second sensation differs within certain limits from the first sensation, quantitatively, qualitatively, or in both respects. The minimum difference needed for the contemporaneous perception of two sensations is called differential threshold.

When two tones of identical frequency and sufficiently great difference of intensity are introduced simultaneously, one in each ear, only the tone of the greater intensity will be heard and will be lateralised in that ear.

Unilateral deafness is determined as follows:—

The normal ear is not occluded, but a tone is introduced into that ear by placing on it a telephone receiver, which is connected with an audiometer, and its threshold established. Then through a second receiver similarly connected, a tone of the same frequency is introduced into the deafened ear and its intensity increased until the tone in the normal ear is suppressed, and the lateralisation of the tone established in the deafened ear. This determines the threshold in the deafened ear. The detection of simulation rests upon the same reasoning.

ANDREW CAMPBELL.

A Novel and Simple Method for the Detection of Simulation of Unilateral Deafness. B. M. BECKER. (*Laryngoscope*, Vol. xxxviii., No. 10, p. 677.)

To the shallow cup of a Bowles' stethoscope a piece of soft rubber tubing, 12 inches long, is attached. To the other end of the tube the bifurcated metal piece is fitted. To each end of metal attach a

Abstracts

soft rubber tube, one 12 inches in length and the other 24 inches, fitted with proper size ear pieces. A ticking instrument, such as a watch, is necessary.

The test depends on two facts, either of which may be used for testing purposes. The first principle is that, when tubes of unequal length are used and we listen through them, the sound will be lateralised to the side of the shorter tube. The sound through the longer tube is completely masked, so that we are aware only of monaural hearing, whereas the hearing is actually binaural. The second element in the test depends upon the fact of binaural hearing. When the longer tube, through which apparently no sound reaches the ear, is compressed, one immediately becomes aware of a decided change in the sound of the opposite ear, due, no doubt, to the fact that binaural hearing has been converted into monaural hearing.

The indirect method of testing is as follows:—

The examiner stands behind the patient and inserts the shorter tube in the normal ear, and the longer tube in the supposedly deaf ear. The stethoscope is applied to the watch and the patient answers that he hears the tick in his good ear. Now the patient is asked to notify a change in sound. The longer tube is compressed (*i.e.* that in the deaf ear) and the patient announces that the sound changed, is less pronounced, and approaches nearer the eardrum. Then we know he is malingering, for if he were deaf in one ear, there would be no change in the sound perceived through the shorter tube. If no change in sound is perceived, the direct method is employed. The tubes are reversed, the short in the deaf ear, and the long in the normal ear. If he says he hears nothing, then obviously he is malingering. If he states he still hears in the normal ear then the tube on that side is compressed and if he still hears, he is exposed.

The longer tube may be compressed prior to insertion and, if the patient hears, he is exposed; if not, the tube is gradually decompressed and if he still does not hear it, then he is again exposed. Thus by compression and decompression of the longer, or even the shorter tube, before or after insertion, one may modify the test to suit the individual.

ANDREW CAMPBELL.

A New Method for the Treatment of Old Standing, Suppurating Radical Mastoid Cavities. E. KOLISCH. (*Zeitschr. f. Laryngologie, Rhinologie, etc.*, 1929, xviii., pp. 315-327.)

Epithelial growth and regeneration is intimately connected with carbohydrate metabolism, as experiments on epithelial tumours have shown (Warburg) and the carbohydrate concerned is glycogen. It is known that insulin increases the glycogen storage in the liver cells, and recently it has been found that insulin will do the same when applied locally to epithelial cells.

Ear

This discovery was soon tried clinically, and for some time insulin has been used very successfully in the treatment of chronic ulcers of the leg.

The healing of radical mastoid cavities depends on epithelial growth, and conditions are on the whole unfavourable. The epithelium covers bone with only a very thin layer of fibrous tissue intervening, and the blood supply is poor. It is, therefore, not surprising that the epithelial lining often necroses, and that local treatment by antiseptic drops or powder insufflations so often fails.

The author has used insulin in 51 cases of old standing radical mastoid cavities where suppuration continued, although conditions were otherwise satisfactory as shown by a careful examination including X-ray photographs of the temporal bone (good access to cavity, no sequestrum, no recurrence of cholesteatoma). At first one uses daily instillations of 1 c.c. of insulin into the cavity, the meatus being closed with cotton wool. After a time it suffices to mop out the cavity with the insulin solution. When the cavity is healed the patient continues for a while to use 2 to 3 drops of the insulin solution twice a week. In some of the cases chemically pure glucose was insufflated in addition to the insulin application, this seemed to answer even better than insulin alone.

The results appear very striking; absolutely dry cavities are obtained in four to eight weeks in cases which have resisted treatment for many years.

J. A. KEEN.

The Prognosis of Simple Chronic Otitis Media. MAX BIGLER
(*Zeitschr. f. Laryngologie, Rhinologie, etc.*, 1929, Vol. xviii.,
pp. 213-220.)

The simple form of chronic otitis media is distinguished by a central perforation and by the absence of cholesteatoma. Statistics collected by Scheibe and Schlittler covering a period of twenty-seven years (80,000 cases of ear disease) show that not a single death could be attributed to the simple form of otorrhea. The so-called acute exacerbation of a chronic otitis (simple or not) does not come under this heading; the prognosis of acute exacerbation is the same as that of any other acute middle-ear suppuration, and will depend largely on the type of organism which has caused the fresh infection.

The author describes an exceptional instance where a chronic otitis, clearly of the "innocent" type and without evidence of a fresh acute infection, led to the death of the patient.

Man, aged 59, with intermittent otorrhea (L) dating back to measles in childhood. Under treatment (acid bor. insufflations), the discharge ceased completely; a dry perforation persisted, hearing slightly impaired, vestibular reactions normal on both sides.

Abstracts

Three years later (in 1927) there was a recurrence which responded to treatment after three to four weeks. There were two further recurrences at shorter intervals, and on one occasion the pus was examined and pneumococci were found.

On 29th October 1927 he complained for the first time of slight neuralgic pains. There had been no illness of the influenza type and no signs to suggest a fresh infection, therefore an acute exacerbation could be ruled out. Three days later the patient was admitted in a comatose condition, and operation revealed pus in a large terminal mastoid cell, an antrum filled with granulations, and a localised abscess with bone destruction near the tegmen antri. Post-mortem, Dr Bigler found purulent meningitis, and a pure culture of pneumococcus was grown from the pus in the meninges. The petrous bone was examined histologically, and there was no sign of cholesteatoma anywhere in the serial sections.

There was a latent empyema in the mastoid, obviously several months old; granulations had filled up a relatively small antrum, and in consequence there occurred pressure erosion of the tegmen and meningitis. Contrary to the rule laid down by Professors Scheibe and Schlittler, a fatal complication ensued in a case, which after the most careful analysis must still be considered as belonging to the group of simple chronic otitis media. The discussion seems to be of considerable importance from the point of view of Life Insurance.

J. A. KEEN.

False Aneurism of the Internal Carotid. A. G. LICHATSCHOFF (Woronesch). (*Zeits. für Hals-, Nasen-, und Ohrenheilkunde*, Band xxiii., Heft 3, p. 254.)

The patient, aged 43, was exposed to the explosion of a heavy projectile in 1914. He was unconscious for some hours and completely deaf in the left ear. This was followed by suppuration in the ear. He came under observation in 1928 with a "polypus" of two years' duration, and facial paralysis of one year. The polypus proved to be a false aneurism of the internal carotid, the size of a walnut, projecting from the external meatus and continuous with its lining. The swelling pulsated strongly, and the pulsation was checked by compression of the common carotid in the neck. Röntgen photography showed a sharply defined bright surface of oval form and of $2\frac{1}{2} \times 1\frac{1}{2}$ centimetres in size in the neighbourhood of the middle ear. The walls of the swelling were so thin that fatal rupture was imminent. The internal and external carotids were tied and the filling of the aneurism was then much slower. The patient became unconscious in the evening, developed right-sided hemiplegia and died in three days. There was found a large cholesteatoma. The middle ear and the external meatus

Ear

were filled up by the aneurism which destroyed the bony walls. The general sclerosis of the patient's vessels had probably a large share in the development of the condition.

JAMES DUNDAS-GRANT.

Peripheral Facial Paralysis in Otology. A. SARGNON and P. BERTEIN.
(*Ann. des Mal. de l'Oreille, etc.*, April 1929.)

In a very comprehensive article the writers begin with a description of the facial nerve, including its sensory and sympathetic branches, only from a knowledge of which can one appreciate thoroughly the subjective and objective sensory disturbances and sympathetic phenomena accompanying a facial paralysis, as well as gain an indication of the site of the lesion.

The various forms of facial paralysis are next described, viz., those due to the various otites, trauma, and tumours, to congenital and herpetic causes, and to cold. With regard to the last, the so-called "essential" paralysis, they show how by careful examination a true etiology can often be found, the paralysis really depending on a latent otitis or mastoiditis (the use of skiagrams is here advocated), or an infection, or general intoxications (*e.g.* syphilis, herpes).

Other conclusions recorded are as follows:—The inflammatory, operative, and herpetic paralyses are rare, and often incomplete, and an appropriate treatment frequently affords relief.

The modifications of subjective and objective sensation should be sought for at the level of the external ear, and the anterior two-thirds of the corresponding lingual region. Unfortunately, their study is difficult, especially in the ear region where overlapping of other sensory nerve fibres may intervene and thus falsify the results of examination. These disturbances of sensation, the pains particularly, are especially marked in the herpetic variety of the paralysis, and are here due to primary infection of the sensory ganglion of the facial nerve.

Inflammatory paralyses are most often due to compression of the nerve by congested mucosa exerting its effect in the second or third portions of the facial, and favoured by dehiscences of the aqueduct of Fallopius. More rarely, and more slowly, a neuritis supervenes.

A facial paralysis may complicate not only a suppurative otitis media, but also a non-suppurative congestive otitis of a latent catarrhal nature; in the latter case it is wise to search diligently for subjective and objective manifestations of the otitis before regarding it as the cause of the paralysis.

Operative paralyses are more often due to nerve compression or contusion than to section. They are more frequent in wounds of the ear caused by projectiles.

Herpetic paralyses, due to infection of the geniculate ganglion, are fairly common. They are characterised by the eruptive and sensory

Abstracts

manifestations that precede and accompany the paralysis. Since, however, these manifestations may be discrete and transitory it is necessary to search for them carefully, sometimes in other ganglion areas. The paralysees due to cold are nowadays rare. According to the latest neurological reports they appear to depend upon inflammatory vascular disturbances of unknown origin in the bulbar nucleus.

In cases of paralysis due to otitis, treatment depends upon early drainage of infected cavities and nasopharyngeal antiseptics; in traumatic cases, whether operative or accidental, in toilet and disinfection of the wound, in order to eliminate every cause of compression and to avoid secondary infection of the contused nerve. Electrotherapy is a useful aid, but its employment must be regulated with prudence. Anti-syphilitic treatment may also be used to modify an unfavourable field, or make clear a diagnosis.

One should intervene only with reserve in cases of late paralysis. The spontaneous regression of a paralysis of definite appearance with total R.D. can be observed after six months or more. Preference, therefore, should be given to the indirect therapeutic methods which seek to restore facial balance without action on the nerve. Such methods are tarsorrhaphy, raising of the buccal commissure by operation or a hook, and operation on the cervical sympathetic above the inferior ganglion.

A very extensive bibliography is appended.

L. GRAHAM BROWN.

The Physiology of Hearing. A. BONAIN. (*Ann. des Mal. de l'Oreille, etc.*, April 1929.)

This very interesting article, a resumé of a report to the Congress of the French Society of Oto-Rhino-Laryngology, October 1928, must be read in its entirety of some thirty pages to be fully appreciated.

The work is divided into three parts. The first consists of a short historical summary of the subject throughout the ages, from the time of Vesalius to that of Helmholtz, and from that of the latter to the present day. The theory of Helmholtz is fully stated, and it is shown how all the research and experiments undertaken for and against this theory have given birth to-day to new ideas on the mechanism of hearing.

The second part is devoted to an examination of these new theories, based on knowledge furnished by the physical sciences, and clinical, anatomic-pathological, and experimental facts.

The third part is the writer's own attempt, from the sum-total of the knowledge thus accumulated, to establish a precise and coherent view on the physiology of hearing. His conception may be briefly stated as follows:—

Sounds transmitted by the air reach the ear by means of progressive vibratory waves, which, on striking the pinna, are definitely reflected by it.

Ear

The appreciation of the direction of sound depends on the incidence with which it strikes the pinna, and is in the nature of an unconscious tactile sensation. Orientation in the lateral field corresponding to each ear seems due to the difference of intensity of the sound reaching the one or the other organ, and to the application of the principle of the maximum stimulation, whereby, of two or more impressions of the same nature transmitted simultaneously the stronger only is perceived.

Further reflections of the acoustic vibratory waves take place in the concha and external auditory canal, owing to the diverse curves that these present. Hence the high tones are partially arrested, and the medium and low tones pass to the tympanic membrane more readily.

The vibratory waves are conveyed to the cochlea through the middle ear by another path than that laid down by Helmholtz in his theory of transmission, viz., by vibrating tympanic membrane, chain of ossicles, foot-plate of stapes, and vestibule. In the author's view they pass from the tympanic membrane through the air in the posterior compartment of the tympanum, which with its boundaries forms a veritable "gaseous lens," to the round window. To explain this theory he gives a new meaning to the term "auditory accommodation." The latter, he says, depends on the synergic action of the muscles of the tympanum and those of the Eustachian tube, whereby the intra-tympanic air is kept at a slightly inferior pressure to that of the external air, *i.e.*, the most useful pressure for hearing, and the "gaseous lens" is altered in such a way as to modify the quantity of vibratory sound energy penetrating to the scala tympani through the round window. On passing the latter the waves of greater length, characterising the sounds of medium and low pitch, are able to penetrate to the level of the first turn of the cochlea, and to pass this bend, an obstacle very difficult to pass for waves of a frequency superior to 4000, which constitute the high tones.

For the dissociation of complete acoustic waves which have penetrated to the different turns of the spiral cochlea, the writer thinks, they pass into the canal of Corti by the smooth zone of the basilar membrane, and are diffracted when passing its lateral meshwork. Once dissociated they reach the membranous resonators formed between the membrana tectoria and the reticulated membrane, placed above the auditory sensory cells on each side of the canal of Corti. Having reached these resonators they develop there stationary waves, which bring about the vibrations of the divisions of the membrana tectoria. These vibrations act on the hairs of the auditory cells, bent downwards in each small compartment and in contact with the tectoria. The impressions which result therefrom, in the analogy with those occurring in the vestibular sense organs, are transmitted by the hairs

Abstracts

to the bodies of the sensory cells, where they are received by the dendrites of the peripheral neurones or ganglion bipolar cells, of which the axons unite and go to form the trunk of the cochlear nerve.

L. GRAHAM BROWN.

"The Men of Glass." Heredofamilial Fragilitas Ossium with Blue Sclerotics and Disturbances of Hearing. E. APERT, Paris. (*Zent. für Hals-, Nasen- und Ohrenheilkunde*, 1929, Band xiv., p. 4.)

Apert summarises the characteristics of the complaint as bony fragility, fractures from the slightest injury, the structure and confirmation of the bones, characteristic shape of the skull, slackness of the ligaments, blue sclera, disturbances of hearing, alterations in the electrical reaction of the muscles, particularly a diminution of sensibility, and lastly the hereditary character.

He advises treatment with extracts of suprarenal capsule, thyroid, and parathyroid.

F. W. WATKYN-THOMAS.

NOSE AND ACCESSORY SINUSES

Meningitis following Frontal Sinus Suppuration. von EICKEN. (*Zeitschr. f. Laryngologie, Rhinologie, etc.*, 1929, xviii., p. 340.)

This is a short report of three cases of fatal meningitis following frontal sinus suppuration, with a discussion on the best method of operation. A sign common to all three cases was œdema around the eye. The symptoms were more suggestive of antral suppuration than of frontal sinus disease. In one case an X-ray showed a clear frontal sinus with well-defined margins, and yet at operation the mucous membrane was found thickened, and meningitis had occurred as an extension of the inflammation.

J. A. KEEN.

The Effect of Sinusitis on Certain Syndromes of Chiasmal Tumour. HAROLD I. LILLIE and WALTER I. LILLIE. (*Laryngoscope*, Vol. xxxviii., No. 12, p. 761.)

Cushing has warned rhinologists to be very careful in the choice of patients for operation on the nasal sinuses in cases of obscure headache, especially when definite optic neuritis is present. Many unfortunate individuals have their sinuses operated upon when the real cause of headache is an intracranial lesion. Sluder, however, replies that an optic neuritis may be caused by lesions of the posterior ethmoidal cells and sphenoidal sinuses which cannot be distinguished from that due to an intracranial lesion.

The earlier symptoms of brain tumour may be vague and obscure, and definite diagnosis is not possible until after a period of careful

Nose and Accessory Sinuses

observation. It is in this type of case that many intranasal operations are undertaken, in the hope of providing relief. The type of headache, due to nasal sinusitis, has been fairly well established, and operations for its relief are successful. It is too much to expect that headaches due to migraine, eye strain, toxæmia, and brain tumour, can be relieved by intranasal operations. In a review of proved brain tumour cases at the Mayo Clinic, it has been found that intranasal and pharyngeal operations have been performed in a relatively high percentage.

Retrobulbar neuritis, as produced by paranasal sinusitis, is usually unilateral. Either all vision is lost suddenly, or the central vision is diminished. There is complete unilateral amaurosis, or unilateral central or cecocentral scotoma with a normal fundus. In a certain percentage of cases true optic neuritis has been observed in conjunction with the foregoing field defects.

Tumours near or at the optic chiasma produce such an ophthalmologic syndrome, but the onset is insidious, and loss of vision progressive. There are bitemporal scotomata or a peripheral field defect. Fundi are normal, or may show a waxy pallor before optic atrophy develops. In a small proportion of cases a combination of sinusitis and tumour may be present, and they may both affect the optic nerve.

The authors describe in detail a number of interesting cases which are described in two groups: those in which intranasal operation did not change the symptoms in any way, and those in which such operation afforded temporary relief.

In conclusion, it is obvious that paranasal sinusitis may be associated with chiasmal tumour and may cause disturbances of vision not typically characteristic of either causative factor. Surgical treatment of sinuses should be instituted before intracranial operation is done. The ophthalmologic syndrome of chiasmal tumour is constant and characteristic, but that due to paranasal sinusitis is not. The rhinologic manifestations of disease of paranasal sinuses are not always characteristic, and its relative importance, as far as visual disturbances are concerned, is difficult to estimate. The incidence of visual symptoms in obvious disease of the sinuses is very low.

ANDREW CAMPBELL.

The Embryology and Neurohistology of Sphenopalatine Ganglion Connections: A Contribution to the Study of Otagia. O. LARSELL and RALPH A. FENTON. (*Laryngoscope*, Vol. xxxviii., No. 6, p. 371.)

The authors have made a thorough study of the embryology and comparative anatomy of the sphenopalatine ganglion and its relations with other nerves.

Abstracts

It is impossible to abstract an article of this type, but anyone who is interested in this field should make a thorough study of it. The paper is well illustrated and there is a full bibliography.

ANDREW CAMPBELL.

Tuberculosis of the Maxillary Sinus: Report of a Case Apparently Cured. E. H. JONES. (*Laryngoscope*, Vol. xxxviii., No. 6, p. 398.)

Tuberculosis of the maxillary sinus is an exceedingly rare disease, only twenty cases had been reported up to 1907. The other sinuses are infected even less frequently.

The author's patient was a man, aged 59, who was suspected of tuberculosis of the lung but never definitely diagnosed as such. His chief symptom was epistaxis over a period of about two weeks, examination revealed a normal septum and no pus, but a little blood could be seen in the middle meatus. X-ray showed a peculiar cloudiness of the superior and inferior borders of the right antrum, while the other sinuses were clear.

Fearing malignancy, a radical operation was performed on the antrum, and inspection revealed a tubercle situated on a transverse septum in the antrum—a typical clinical tuberculosis. This septum was removed and examined microscopically, but definite evidence of tuberculosis was not obtained. The secretions from the antrum, however, gave positive results.

The antrum was injected each day with 50 per cent. chaulmoogra oil for about two months, with apparent cure nine months after the last injection.

ANDREW CAMPBELL.

A Case of Cancer of the Nasal Cavities. GAMÔU, YOSHIO. (*Zent. f. Hals-, Nasen- und Ohrenheilkunde*, 1929, Vol. xiv., 81.)

The patient, aged 26, had noticed nasal obstruction for two years. On the first examination nothing was found except a deviation of the septum to the left and swelling of both inferior turbinals. No improvement followed out-patient treatment, and a year later the patient came again, complaining of right-sided bleeding from the nose and extreme obstruction; there was no headache, no spontaneous pain, and no sensation of pressure. Far back in the right nostril a smooth bluish red tumour was seen, completely blocking the right side. It was movable and moderately hard. Posterior rhinoscopy showed that the tumour did not originate in the nasopharynx, but it bled so easily that the author could not determine the exact site of origin. The hearing was normal, Wassermann negative, no changes in the fundus oculi, no swelling of the lymphatic glands. The tumour enlarged

Pharynx

rapidly, so that both the posterior nares were blocked, and the patient could not breathe at all through the nose; the voice also was affected. A microscopical examination after admission showed a squamous-celled carcinoma.

Four operations were performed: twice the right antrum was opened by the Denker route, and attempts were made to remove the tumour with the ordinary snare and with the cautery loop. Both these failed on account of the severe hæmorrhage and the hardness of the growth. The site of origin appeared to be the middle turbinal. Radium was then inserted, and the patient was treated with X-rays. Four weeks after the first administration of radium the tumour was so much smaller, more movable, and less vascular, that it could be removed with a Hartmann's snare. It was then found to have arisen from the posterior end of the inferior turbinal and the middle nasal meatus. No carcinoma tissue could be detected in the tumour when it was removed.

F. W. WATKYN-THOMAS.

PHARYNX

Contribution to the Etiology and Therapeutics of Peritonsillar Abscess.

Dr JAN GORNY (Berlin). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Band xxiii., Heft 2, p. 147.)

One of the less common causes of peritonsillar abscess is a foreign body of some sort, and Gorny relates a case of his own in which, along with the typical swelling, there was a yellow spot resembling an ordinary caseous crypt. It proved, however, to be caused by a white tooth-brush bristle 9 mm. in length, lying in a canal of its own, separate from the body of the abscess. He quotes a similar case of Seiffert's in which the tooth-brush bristle was 3 cm. in length. Its point projected through the mucous membrane and it was easily extracted; speedy healing followed.

JAMES DUNDAS-GRANT.

The Value of Tonsillectomy in the Prevention of Acute Rheumatism, Rheumatic Carditis and Chorea. N. GRAY HILL. (*Lancet*, 1929, Vol. ii., p. 571.)

The author comments upon the difficulty of proof or disproof of the rheumatic infection theory through the tonsils, and reviews the literature concerning the relationship, real or supposed, between rheumatism and the tonsils. He then gives his experience of 300 rheumatic children whose tonsils were not removed, and 50 in whom tonsillectomy was performed. The percentage of endocarditis, chorea, endocarditis and chorea, other rheumatic signs, and deaths, are remarkably similar, and it is hoped that the results "will be sufficient

Abstracts

to indicate that tonsillectomy, even when carried out in a satisfactory manner during the early stages of the disease, does not appear to have any great influence on the behaviour of rheumatism, and is no safeguard against either carditis or chorea." MACLEOD YEARSLEY.

Ludwig's Angina and rapidly fatal Septicæmia following Tonsillectomy.

P. REITER. (*Zeitschr. f. Laryngologie, Rhinologie, etc.*, 1929, Vol. xviii., pp. 230-233.)

The author believes that these rare cases of fatal complications should always be freely reported. The patient was a young man, aged 21, who suffered from recurrent tonsillitis and quinsies. When first seen with view to operation there was still some reddening around the left tonsil, and the operation was postponed for three weeks in order to allow the inflammation to subside completely. At the operation under local anæsthesia nothing special was noted, yet signs of acute sepsis began on the following day. On the third day after the operation there was an intense œdematous swelling of the neck, especially in the left submaxillary region; this was incised and some brownish thin fluid evacuated. The patient went rapidly downhill from general sepsis, and died in the afternoon of the same day.

An organism of great virulence, probably of the hæmolytic streptococcus group, was mobilised by the operation, set up an acute infection in the neck tissues, and rapidly became generalised in the blood stream. It may be that the interval between the last attack of quinsy and the operation was not long enough, and in view of this occurrence the author thinks that the minimum interval should be six weeks.

Tonsillectomy should always be avoided when there are still signs of inflammation, the only exception being those cases of peritonsillar suppuration which become complicated by angina, by general septicæmia or by jugular thrombosis. Then, as a desperate measure, the tonsil may have to be removed for purposes of drainage.

J. A. KEEN.

How can the Dangers of Tonsillectomy be Diminished? Dr KRAMPITZ.

(*Zeitschr. f. Laryngologie, Rhinologie, etc.*, 1929, Vol. xviii., pp. 291-300.)

The author describes this method of "bloodless" tonsil dissection under local anæsthesia. The new feature is a special way of dealing with the vessels. At first the tonsil is partly detached and the capsule is defined in the usual way. The tonsil is then dragged inwards and by blunt dissection of its attachments certain fibrous bands become defined (see illustration in text). Each fibrous band is caught in a special crushing clamp which is left on for a few seconds; the fibrous

Pharynx

band is then cut close to the tonsil. Crushing a vessel over an area of 4 to 5 mm., *i.e.* width of the clamp, is more efficient than tying it. The thrombus becomes more quickly organised, and it is firmer when the vessel is crushed than when it is tied by a ligature.

Dr Krampitz then proceeds to prove this point by animal experiment; two illustrations of his histological preparations are given.

J. A. KEEN.

The Etiology and the Etiological Treatment of "Plaut Vincent's Angina." P. MANGABEIRA-ALBERNAZ. (*Laryngoscope*, Vol. xxxix., No. 1, p. 1.)

The disease under consideration is a fusospirochetosis caused by the association of the fusiform bacillus with the spirillum. It has been proved conclusively that the two organisms act in combination, and that one is not pathogenic without the aid of the other, though pathologically one would be tempted to believe that the spirillum was the causative organism. There are five requisites in any remedy used in treatment. It should penetrate the diseased tissues and be antiseptically active for an appreciable time. It should be neither caustic nor destructive, but have a dissolvent action upon necrotic tissue, and its antiseptic action should be specific upon one or other component of the symbiosis. Salts of bismuth and arsenobenzols satisfy the above requirements. Bismuth is less toxic, more powerful, more economical, and acts as a sedative.

The local application of an emulsion of 30 per cent. bismuth tartrate is the best treatment the author has experienced. There is a very full bibliography.

ANDREW CAMPBELL.

Bilateral Gangrene of the Feet following Tonsillectomy. IRVING S. WRIGHT. (*Zent. f. Hals-, Nasen- und Ohrenheilkunde*, 1929, Vol. xiv., p. 68.)

Two days after removal of tonsils and adenoids in a child aged 2½, a septicæmic condition occurred with blood in the stools. On the seventeenth day patches of gangrene appeared on the toes and about the ankle-joints; the dorsalis pedis artery was palpable on both sides. Two days later a mitral systolic murmur was found. Streptococcus hæmolyticus was grown in cultures from the urine and from the gangrenous patches. The gangrenous areas healed completely in six weeks.

The author believes that an acute endocarditis followed the tonsillectomy, and that this, in its turn, caused embolism, first in the mesenteric vessels, and then in the arteries of the feet.

F. W. WATKYN-THOMAS.

Abstracts

ŒSOPHAGUS—ENDOSCOPY

Peroral Endoscopy. EDMOND AUGOIN. (*Archives Internationales de Laryngologie*, May and June 1929.)

As a disciple of Chevalier Jackson, the author is a firm believer in performing endoscopy with tubes of small lumen and distal illumination, without general anæsthesia.

His work describes 100 consecutive extractions of foreign bodies from the digestive and respiratory tracts; pharynx 12, œsophagus 66, respiratory tract 22.

Nearly every case is described in detail: history, localisation, method of extraction, and photograph of the foreign body. Further, the principles underlying the removal of different types of foreign bodies in the various anatomical regions are discussed.

The extraction of foreign bodies from the pharynx of young children should always be carried out by direct pharyngoscopy to avoid the possibility of their becoming impacted lower down. Safety-pins in this situation are best removed with the rotation forceps.

Impacted coins in the hypopharynx are best removed with the œsophageal speculum; as a precautionary measure, however, an œsophagoscope should always be at hand.

Of the 66 foreign bodies in the œsophagus, 7 were open safety-pins. In all cases where the length of the pin did not exceed the diameter of the gullet, the method of extraction was by rotation.

Impaction of a food bolus should be regarded with suspicion as a possible sign of an early malignant stricture.

The cardinal sign of a foreign body in the trachea is an asthmatic whistling, which can be heard some distance away. Another sign—which it is dangerous to induce—is the valve-like sound and feel caused by the F.B. knocking against the subglottic region during a cough.

Of those foreign bodies impacted in the respiratory tract, 14 were in the bronchi. The symptomatology, physical signs, and radiological findings are discussed in detail. Stress is laid on the inadvisability of carrying out a bronchoscopic examination without a thorough clinical and radiological report.

MICHAEL VLASTO.

Endoscopic Treatment of Œsophageal Suppuration. RUDOLPH KRAMER. (*Laryngoscope*, Vol. xxxix., No. 2, p. 97.)

Three very interesting cases are reported, in which suppuration was present either in the œsophageal wall itself, or in its immediate surroundings.

Œsophagus—Endoscopy

The first case was a patient who was seen three days after swallowing a fish bone. A perforation of the œsophageal wall was seen at 18 cm. from the teeth, from which 5 c.c. of thick pus was expressed. The bone was removed and recovery was uneventful. The second patient gave a similar history of a fish bone ten days previously. About 16 cm. from the teeth an area of granulation tissue was found about 1 cm. in diameter, with an area of necrosis in the centre. A small amount of pus was expressed on pressure with the œsophagoscope. The opening was dilated and two ounces of thick pus evacuated. Necrotic tissue was removed with punch forceps and the cavity aspirated. Complete relief was obtained in a very short time.

The third case complained of stomach trouble for eight months, and an œsophagoscopy was undertaken. During this procedure great pain was experienced, and on the following day fever and swelling on the side of the neck developed. Symptoms became more marked, and he was unable to swallow anything, while the temperature rose to 103°. The author now saw the case and found a large inflammatory mass on the left side of the neck, with displacement of the trachea to the right, and an œdematous pharynx with a bulging on the left side. It looked like a case for external operation, but as a result of the first two cases, it was decided to give the œsophagoscope a chance. On œsophagoscopy a tear was found on the left side of the hypopharynx, just above the cricopharyngeus; the margins were necrotic, and when separated foul pus escaped. The abscess cavity was aspirated and the necrotic edges of the wound removed by punch forceps. Marked rapid improvement resulted immediately, and in a short time recovery was complete.

The third case is unique, and represents the most severe type of œsophageal infection, or rather, mediastinitis, following injury during œsophagoscopy, and is the first case of mediastinal abscess successfully treated by endoscopic methods only.

ANDREW CAMPBELL.

Congenital Atresic Abnormality of the Œsophagus. T. V. COOPER.
(*Lancet*, 1929, ii., p. 607.)

The author describes a case in a female infant, aged four days. There were nævi at the margins of the nostrils and at the lower end of the sacrum, and spina bifida. The œsophagus terminated in a blind sac $\frac{3}{4}$ inch above the bifurcation of the trachea, and there was no apparent continuation of this sac. Followed from the cardiac end, the œsophagus communicated with the trachea at its bifurcation. The foramen ovale and ductus arteriosus were patent.

MACLEOD YEARSLEY.

Abstracts

MISCELLANEOUS

Vaccine Therapy (Local Immunisation by Besredka's Method) in Oto-Rhino-Laryngology. E. SOLOMONOV. (*Zent. f. Hals-, Nasen- und Ohrenheilkunde*, 1929, Vol. xiii., 803.)

In 28 cases of otitis externa the author adopted Besredka's vaccine therapy; 19 cases were treated with polyvalent staphylococcal vaccine and 9 with a staphylococcal anti-virus. The results were very encouraging; pain diminished after an hour, and the period of recovery was much shorter. Thus any tendency to cicatrisation is much diminished. The vaccine was applied locally on sterile tampons of cotton wool packed into the external auditory meatus.

Experiments were made on the treatment of middle-ear suppuration with staphylococcal and streptococcal anti-virus. In 76 per cent. of cases of chronic middle-ear suppuration with partial destruction of the drumhead the results were favourable. Hearing improved, and in some cases the perforation closed. The method proved useless in the presence of bone disease with granulations in the middle ear. On an average, in the favourable cases the period of treatment was two to three weeks.

F. W. WATKYN-THOMAS.

Stammering in Childhood and Familial Kappazism. DAITO, TOSHIZO, Fukuoka. (*Zeits. für Hals-, Nasen- und Ohrenheilkunde*, Band xxiii., Heft 3, p. 263.)

A brother, aged 8, and a sister, aged 5, had inability to form the K closure. Daito's palatographic examination showed no anomaly, but inspection of the tongue and Röntgen examination gave the picture of tongue fixation.

In the way of treatment, manipulations such as pushing the floor of the mouth upwards during the utterance of K, at first with silent breath, then in a whisper, and then aloud, as also uttering the second stop sounds (d, t, etc., J. D.-G.), while holding a finger in the mouth are effective, but practice of the ear in the correct perception of the sounds is indispensable.

JAMES DUNDAS-GRANT.

Effects Produced by the Poison Gases of Warfare on the Ciliated Epithelium. I. KRUKOVER. (*Zent. f. Hals-, Nasen- und Ohrenheilkunde*, 1929, Vol. xiv., p. 2.)

This is the report on a series of experiments with chlorine and chlorine picrate. Varying concentrations of the poisons were used, and the mucous membrane examined microscopically. The results varied from hyperæmia to mucosal hæmorrhage with necrosis of the ciliated epithelium and destruction of the subepithelial layers. These

Miscellaneous

destructive processes predisposed to infection of the upper airway, since the continually acting protective mechanism of the ciliated epithelium was absent; it is this that constitutes the greatest danger to the patient in cases of gas-poisoning that are not immediately fatal.

F. W. WATKYN-THOMAS.

Asthma and Hay-fever. J. E. R. McDONAGH. (*Lancet*, 1929, Vol. ii., p. 271.)

The author considers that asthma and hay-fever are symptoms of inherited disease, caused by the precipitation of hydrated protein particles, and by the lack of oxygenated blood in the respiratory tract. The chief signs and symptoms of inherited disease are mal-coordination and a chronic intestinal intoxication. Asthma and hay-fever can usually be prevented by correcting the mal-coordination and removing the chronic intestinal intoxication. Asthma and hay-fever are not diseases, and asthma is not caused by a stimulation of the vagus occasioning a constriction of the bronchioles. When adrenalin palliates an attack, it does so by causing the hydrated protein particles to disperse, not by stimulating the sympathetic nervous system. Asthma and hay-fever can usually be overcome with drugs (as chlorine and acetyl-choline, or strontium aspartate) able to cause dispersion of the hydrated protein particles. These measures are really no more than palliative, and a "cure" can result only in the prevention of inherited disease.

MACLEOD YEARSLEY.

A Study of Scleroma of the Upper Air Passages. A. PUTSCHKOWSKY. (*Zeitschr. f. Laryngologie, Rhinologie, etc.*, 1929, Vol. xviii., pp. 353-374.)

For practical purposes this rare disease is only met with in certain parts of Russia, Poland, Galicia. The author is director of a clinic in Kiew (Ukraine), and in this article he has carefully studied 75 cases of this disease; the photographs included in the text give a very clear idea of the main clinical features, especially the characteristic infiltration of the upper lip and the various types of nasal deformity.

The capsulated bacillus of Frisch is still looked upon as the cause of the disease, but apparently there is some doubt, and many observers believe that the Frisch bacillus is only a saphrophyte. In the author's cases this bacillus was isolated in all but five instances.

The disease is almost entirely confined to the rural population and it is found amongst the very poorest class.

Treatment is still unsatisfactory. X-ray exposures are generally given; obstructing masses in the nose are removed surgically. The most difficult cases are scleroma of the larynx, which may be primary. There are eighty references.

J. A. KEEN.

Review of Book

The Structure and Innervation of the Sinus Caroticus in Man and Mammals. F. de CASTRO. (*Zent. f. Hals-, Nasen-, und Ohrenheilkunde*, 1929, Vol. xiv., p. 1.)

In all mammals, with the exception of the ruminants where it is found at the origin of the occipital artery, there is a sinus at the bifurcation of the common carotid in the origin of the internal carotid. The arterial wall is here rather thin, the thin section roughly corresponding with the division of the angle. At this spot there is in the adventitia a complicated system of nerve-endings. The terminals of the centripetal fibres are ramified dendrites of which two types can be distinguished. Both are capsular; the ramifications show either varicosities or different forms of end-plates. These ramifications lie between the connective tissue bundles of the adventitia, and both types are in close relation to the connective tissue cells. The anatomical basis of Hering's sinus reflex corresponds with this territory of innervation; the reflex disappears if the nerve-endings in this region are destroyed with phenol. The centripetal fibres extend to the terminal ramifications of the artery of the carotid body. Division of the glossopharyngeal nerve causes no degeneration of the whole system. The axial cylinders in the parenchyma are neither secretory nor centrifugal, but centripetal. Intracranial division of the 9th, 10th, and 11th nerves causes no degeneration within the glomus. The author suggests that the carotid body is not a paraganglion, nor a typical endocrine gland, but is concerned in the determination of qualitative changes in the blood. He points out that the parenchyma cells of the carotid body are bipolar, one end is in intimate relation with the capillaries, the other with the nerve-fibres.

F. W. WATKYN-THOMAS.

REVIEW OF BOOK

Handbuch der Hals-Nasen Ohren-heilkunde. Edited by Drs DENKER and KAHLER. Vol. ix., pp. 720. Berlin: Julius Springer.

THIS volume deals with the œsophagus and lesions of the neck. The first 36 pages are devoted to anatomy and physiology, in which, amongst other data, are included some interesting and instructive X-ray photographs. Attention is also drawn to what are described as the three normal "narrowings" of the œsophagus. Of these, the first is the actual upper opening which is regarded more as the result of physiological control by the lower fibres of the inferior constrictor of the pharynx, than as a real structural isthmus. Other factors in