

ABSTRACTS

THE EAR.

Diathermy in the Treatment of Stenosis of the Auditory Meatus.
BERTEIN, SARGNON and BAUDAL. (*L'Oto-Rhino-Laryngologie
Internationale*, October 1924.)

The stenosis was the result of an accident in which the pinna was torn away. The diathermy was applied with a needle electrode on two occasions, at intervals of ten days, the stenosis being entirely cured.

A. J. WRIGHT.

Two Unusual Anatomical Conditions of the Temporal Bone. Dr
LOTHAR HOFMANN. (*Monats. f. Ohrenheilk.*, Year 59, Vol. iv.)

1. Absence of the nerve to the posterior ampulla. Male, aged 44, complained of pain in the right ear for some years. Four days before his admission, on the 25th June 1921, severe giddiness, headaches, and fever developed. Examination revealed: Right ear, total destruction of membrane, offensive chronic suppurative otitis media; left ear, tympanic membrane normal. Right ear, deaf and unresponsive to vestibular tests; left ear, hearing normal. Spontaneous nystagmus towards each side. Cerebro-spinal fluid cloudy. Radical and labyrinth operation performed. Dura mater in the posterior fossa altered in appearance; exploration proved negative. 27th June 1921, patient died.

Post-mortem revealed extensive basal, purulent meningitis. The temporal bone on the right side was removed, decalcified, and serial sections prepared for microscope.

Examination showed that, although the posterior canal was normally developed, the nerve to its ampulla was absent, and the special sensory epithelium of the crista was replaced by simple cylindrical epithelium. The internal auditory meatus contained pus, which extended between the nerve bundles, and naturally suggested a basal meningitis as its source. The author, however, thinks there is good reason to suppose from its peculiar distribution, that this was really an agonal occurrence, and considers that the condition was merely incidental to the absence of the posterior ampullary nerve. A short critical survey of the case follows.

2. A case of extreme lack of development of the left sigmoid sinus and internal jugular vein. An illustration is given of the specimen which was removed from a man of 27, who died almost at once after admission to the hospital, as the result of acute left-sided otitis media and meningitis. A detailed description with anatomical conditions in connection with this irregular development of the sigmoid sinus is

The Ear

given, with a short summary of literature and reports on the subject, which may prove of especial interest in connection with Mr A. Cheate's recent paper (see p. 633 of the current number of *The Journal*).

A. R. TWEEDIE.

Is the Incidence of Complications in Acute Inflammation of the Middle Ear dependent upon Bacteriological or Anatomical Factors?
WALTER HESSE. (*Archiv. fur Ohren-, Nasen-, und Kehlkopfheilkunde*, 113 Band, Heft 1/2, June 1925.)

Hesse cites references to the capability of the ciliated epithelium of the Eustachian tube to resist the ingress of micro-organisms. He states that mere penetration of organisms into the middle ear is not sufficient to set up acute inflammation. He refers to Wittmaack's work on the normal and pathological pneumatisation of the temporal bone and to the views of the Director of the Jena Clinic on the "constitution" of the mucous lining as the determining factor. Hesse is more concerned, for the moment, with a further problem. Why, he asks, should acute otitis media subside in some instances and in others be followed by mastoiditis, sinus-thrombosis, extra-dural and brain abscess or meningitis? He observed such complications in 6 out of 15 infections with streptococcus hæmolyticus; 9 out of 21 infections with streptococcus non-hæmolyticus; 7 out of 8 infections with streptococcus mucosus, and 1 pneumococcus infection without complication.

Clearly, the proportion of complicated cases bore no direct relationship to the degree of pathogenic virulence of the organism. Agglutination tests proved that the patient's powers of resistance were raised in all but overwhelming and rapidly fatal infections. Examination of the purulent discharge in no instance revealed the local production of antibodies (a phenomenon described by Wassermann and Citron). Cellulo-humoral resistance to infection was not the decisive factor.

Further researches suggested that the onset of complications was mainly determined by hyperplasia of the mucous membrane of the middle ear and bone cell system (possibly, in some instances, originating in the condition known as latent catarrh of infants) and by a pneumatisation type of the mastoid process—demonstrated during life by X-rays—which hindered drainage of purulent secretion from the inflamed cells. This appeared particularly true of the streptococcus mucosus, an organism of relatively low virulence which probably gains a footing only when large air cells lined with hypertrophied mucous membrane are remotely situated at the periphery. Hence streptococcus mucosus tends to produce a clinical picture of its own, namely, a latent infection of the peripheral cells. Two cases are

Abstracts

described, one of three to four weeks' duration, the other of nine weeks' standing, in each of which streptococcus mucosus was found in the ear. Skiagrams showed small-celled mastoid processes with abnormal cells in one instance behind the sinus, in the other at the mastoid tip. These were sought for when the operations might otherwise have been regarded as complete, and were found to conceal droplets of thick pus within a greatly swollen epithelial lining.

Hesse describes his methods of obtaining cultures and comments on details of bacteriological interest, such as the brief survival of bacteria in normal saline. He summarises his conclusions and appends a bibliography.

WM. OLIVER LODGE.

Otitis Media in Scarlet Fever. ELLISON L. ROSS, Ph.D., M.D.
(*Annals of Otolaryngology, Rhinology, and Laryngology*, December 1924,
Vol. xxxiii., p. 1319.)

At the Durand Hospital of the John M'Cormick Hospital for Infectious Diseases, 1305 cases of scarlet fever were treated during the period 1912-17, and of these 211, or 16 per cent., developed otitis media.

Between the years 1917-22 otitis media occurred in 12.3 per cent. of the scarlet fever cases. The treatment adopted was to syringe the early profusely discharging ear with warm boric lotion and apply a gauze dressing. As the discharge lessened, drops of boric acid in spirit (30 per cent., rising to 95 per cent.) were used.

Ross, after reviewing the opinions of various authors as to the etiology of the acute otitis media, whether blood-borne or due to direct extension, considers that "the argument is in favour of considering that the otitis media is primarily a result of the scarlet fever in the middle ear, but the condition is often aggravated by secondary infection through extension from the throat along the Eustachian tube."

He points out that rapid and severe desquamation in the middle ear might very readily excite an inflammation.

In order to ascertain whether the presence of otitis media renders a patient more susceptible to the usual complications of scarlet fever a further series of 2595 cases were studied. Except for the obvious complications of mastoiditis and facial paralysis no such relationship was discovered. Further, it was noted that none of the common complications of scarlet fever rendered the patient more susceptible to the incidence of otitis media.

F. HOLT DIGGLE.

Gradenigo's Syndrome in Tuberculous Petro-mastoiditis. DR HENRI ALOIN, Lyons. (*Revue de Laryngologie*, 30th June 1925.)

Since Gradenigo's original article in 1907, in which he tabulated 57 cases of otitis media accompanied by 6th nerve paralysis, a large number of cases of this type have been reported, and their general

The Ear

features are well recognised, viz., acute otitis media, followed by deep-seated pain in the temporal region and face on the same side, and 6th nerve paralysis. Occasionally, but rarely, the same sequence of events has been observed after an acute exacerbation of chronic otitis media. Anatomically, the spread of inflammation is determined by a petro-mastoid bone of the pneumatic type, with cells extending into the petrous pyramid. Paralysis of the 6th nerve is due to pachymeningitis causing compression of the trunk of the nerve in the space of Dorello.

Dr Aloin reports an interesting case of this type in which the infecting agent was tubercle. The patient was an unhealthy man of 55, a chronic alcoholic, the subject of albuminuria. The course of the disease was briefly as follows: Acute otitis media of moderate intensity on the right side; very slight discharge from the ear; tinnitus and pain in the ear, slight at first but gradually increasing in intensity. The pain extended to the whole of the right side of the face and head. He was first seen by Dr Aloin two months after the onset of the otitis. There was a very small perforation of the tympanic membrane, with slight discharge, but no mastoid tenderness.

The perforation was enlarged. The pain continued. Eight days later slight 6th nerve paralysis, with some dilatation of the right pupil, occurred. A simple mastoid operation was performed; granulations were found in the antrum; the cortex of the mastoid was eburnated. The field of operation remained indolent and unhealthy. Paralysis of the 6th nerve became complete.

The motor branch of the 5th nerve became paralysed; some anaesthesia of the supra- and infra-orbital regions developed, gradually increasing and involving the cornea, which became opaque and infiltrated. Rapid wasting took place—symptoms of meningitis supervened four and a half months after the onset of the otitis, and ended fatally. No post-mortem examination was allowed. The diagnosis of tuberculosis was supported by the results of inoculation of the discharge into guinea-pigs.

The reporter draws attention to the following points in the case record; the insidious onset and relentless progress of the symptoms; the absence of local inflammatory reaction, and of repair in the wound; the gradually increasing signs of pressure on the 6th and 5th nerves, and the prolonged resistance of the dura mater to spread of infection to the meninges. He suggests that tuberculous infection may be a more frequent cause of petro-mastoiditis of this type than it is generally recognised to be, especially in those cases which run a prolonged and indolent course.

G. WILKINSON.

Abstracts

The Influence of Sexual Development and Disorders on the Etiology of Otosclerosis. DR CONRAD STEIN. (*Wiener Klinische Wochenschrift*, 22nd and 29th January 1925.)

The author has made a careful investigation of a large number of cases of otosclerosis, and has come to the conclusion that there is a definite connection between sexual functions and disturbances and the onset of this disease. He has found it to be more common in women than in men, and to occur in women particularly at the onset of puberty, in pregnancy, and at the climacteric.

Of 125 cases 85 were females. Of these, 31 patients suffered from menstrual disorders, and it was noticeable that in a large proportion of this type of case the otosclerosis had started before the twentieth year. It has long been observed that pregnancy has the effect of accelerating the course of otosclerosis, and in many cases the onset of the disease can be traced back to the first pregnancy. After parturition there is usually marked amelioration in the condition, for a time, the symptoms however becoming much more pronounced at the onset of another pregnancy.

In some cases the onset of otosclerosis occurs, not during pregnancy itself, but during the puerperium and the period of lactation. Septicæmia, disorders of lactation, etc., have a particularly evil effect on the course of the disease.

Of 10 male patients who commenced to suffer from otosclerosis at puberty, two suffered from hypoplasia and one from hyperplasia of the genital organs, and a fourth from hypospadias. Other patients gave histories of neurasthenia, accompanied by impotence, frigidity, and other derangements of the normal sexual life.

The author finds that in nearly every case otosclerosis is associated with conditions of nervous degeneration, particularly in connection with sexual abnormalities, and therefore reaches the conclusion that it is due to disturbances of the secretion of the endocrine glands. This view is also upheld by Professor Hugo Frey of Vienna (cf. *Wiener Klinische Wochenschrift*, 5th February 1925). F. C. ORMEROD.

Minute Structure of the Labyrinth. DR K. KHILOW. (*Monats. f. Ohrenheilk.*, Year 59, Vol. iii.)

After drawing attention to the fact that we have hitherto been guided too much by the macroscopical anatomy of the labyrinth, and to the unreliability of doing so in connection with an organ in which detail is of such obvious importance, the author commences by giving a short description of the technique adopted by Beck and others, for the differential staining, *during life*, of the various structures concerned.

The method, briefly, would appear to consist in the substitution of an artificial fluid for the blood, which latter is again subsequently

The Ear

replaced by special staining fluid; the preparation of the specimen is finally completed after decapitation, according to the methods of Wittmaack or Yoshii.

In subsequent sections of this preparation, the author claims that the most minute details of the labyrinth can be studied much more accurately and easily than by other methods.

He draws attention to the exact position of the otoliths and their relation both to the neighbouring structures and the planes of space, with a short critical survey of their physiology.

The article concludes with a reference to the effect of variations in blood pressure on equilibration, and the pathological sequence of the same, as represented by the intricate problem of vertigo.

ALEX. R. TWEEDIE.

Humoral Deafness. R. CLAOUÉ. (*L'Oto-Rhino-Laryngologic Internationale*, July 1924.)

The rôle of the labyrinthine fluids in audition has not received sufficient attention. Bezold observed in a case of loss of the perilymph through a fistula, an immediate loss of hearing for low tones, which is supposed to indicate a lesion of conduction. After an interval the hearing became normal, presumably owing to replacement of the fluid. As alteration in the intra-ocular fluids produces great effect on the vision, so changes in the intra-labyrinthine fluids produce alterations in hearing. By analogy, just as in the eye there is the ciliary body, so in the labyrinth there is the stria vascularis. Modifications of the labyrinthine fluid will produce the same symptoms and signs that are associated with ankylosis of the stapes. Even Gellé's test would be positive with a mobile stapes and a more dense labyrinthine fluid.

This possibility may explain cases in which the clinical picture is one of otosclerosis but in which improvement or cure takes place. A case of this type is quoted in which, however, there was no family history of deafness, and the onset had been accompanied by a disturbance in the general health. A bad prognosis was given, but improvement took place under general constitutional treatment. The points by which one can diagnose cases of humoral deafness from otosclerosis are an absence of family history, a rapid onset, and a diminution or loss of excitability of the vestibular apparatus, which in cases of true otosclerosis is normal. The treatment of these cases should consist in a careful inquiry into the general health and such general treatment as this may necessitate.

A. J. WRIGHT.

Can Inflammation of the Sacculus Endolymphaticus be recognised Clinically? Prof. FRANCOIS NINGER, Czecho-Slovakia. (*Revue de Laryngologie*, 31st May 1925.)

Considerable difference of opinion exists as to the clinical importance of the aqueduct of the vestibule and endolymphatic sac. Boesch

Abstracts

collected 21 reported cases of intracranial complications following purulent labyrinthitis in which the path of infection seemed to be via the aqueduct of the vestibule. On the other hand, Wegener quoted a case of Politzer's as the only one in which such a sequence of events had been proved, and was of opinion that a thorough histological examination was the only possible method by which the path of infection could be traced. Siebenmann was of opinion that a post-mortem diagnosis by careful microscopic examination was possible. Zange was of the same opinion, and believed that infection travels by this route from the labyrinth to the cerebellum or meninges in 18.5 per cent. of cases analysed by him. Kramm reported a fatal case of empyema of the saccus and considered the possibility of diagnosing the condition during life. Goerke reported the histological examination of another case, but considered that the anti-mortem diagnosis was scarcely a practical possibility.

Professor Ninger reports three cases, in two of which he made the diagnosis, and was able by operation to arrest the spread of the infection towards the brain.

CASE I.—A woman had previously had two operations on the right mastoid; pain and discharge continued; vertigo for three weeks before admission; deafness on the right side; caloric reaction positive. At the third operation some necrosed bone was removed, and a deep extension of a cholesteatomatous mass was found in contact with the dura mater of the middle fossa. Some improvement followed operation, but later, return of pain occurred on the right side of the head. Spontaneous nystagmus to both sides; outward deviation of the right arm in the pointing test; tendency to fall backwards and to the right in all positions of the head.

The right cerebellar hemisphere was explored with negative result. During the exploration, a remarkable hypertrophy of the petrous bone between the sinus and the labyrinth was noted. There was still no improvement of the symptoms. A further operation was done, and the dura mater stripped back from the posterior surface of the petrous bone. A quantity of slightly turbid fluid escaped from a cavity in the dura mater which was taken to be the endolymphatic sac. The fluid was found to contain a diplococcus. All the symptoms of cerebellar irritation disappeared, and the patient made a rapid recovery.

The author suggests that the symptoms were due to "compression" of the lateral lobe of the cerebellum by distension of the sac. He quotes Portmann's observation that the saccus is separated from the posterior fossa by a very delicate wall, but that it has a thick "mattress" of areolar tissue between it and the hollow in the bone in which it rests. If an abscess occurs here it is not subdural but endodural, and the layer separating the abscess from the posterior fossa is very thin.

The Ear

In this case the diagnosis, on the strength of which the last, and successful, operation was undertaken, rested on a persistence of the cerebellar symptoms after abscess of the cerebellum had been excluded by exploration. The experience gained in this case led to an earlier diagnosis in the next.

CASE II.—Male, aged 28, had chronic suppuration of the left ear; radical mastoid operation performed one year previously. He had violent pain in the occipital region, and dizziness for one week before admission, with deafness in the left ear. At the second operation a focus of granulations was found in the depth of the sclerosed bone. Pain and dizziness continued; slight spontaneous nystagmus to both sides. The dizziness and nystagmus increased with a tendency to fall to the left, and backwards; upward deviation in horizontal pointing test, constant in all positions of the head. Caloric reaction lost on the left side. The author states that the deviation in the pointing test, and the spontaneous nystagmus *in the absence of other* (unspecified) *symptoms of abscess of the cerebellum* led him to diagnose inflammation of the saccus. Further operation revealed diffuse labyrinthitis with granulations in the cavities of the labyrinth, and a collection of turbid fluid in a cavity the size of a bean within the dura mater in the situation of the saccus. Examination of the fluid yielded a Gram-negative bacillus. After the operation the pressure symptoms rapidly disappeared.

The author points out that symptoms of irritation of the labyrinth secondary to sinus phlebitis may be readily accounted for by the close proximity of the posterior extremity of the sac to the sinus. The sinus is separated from the sac only by a layer of areolar tissue, as has been pointed out by Portmann.* The same possibility exists in cerebellar abscess. The third case is quoted in illustration of this connection.

CASE III.—A boy, the subject of chronic suppuration of one ear, had latent abscess of the cerebellum. Sudden death occurred from respiratory failure during transport of the patient to the theatre for operation. The symptoms of irritation of the labyrinth previously observed consisted of spontaneous nystagmus to the affected side, inclination of the body to the opposite side, the direction of the inclination depending on the position of the head. Caloric reaction was present, and hearing nearly normal. No pathological condition was found in the labyrinth post-mortem. The author considers the labyrinthine symptoms to have been caused by increased tension of endolymph and irritation of the sac, due to the absorption of toxins from the cerebellar abscess in close proximity. G. WILKINSON.

* Georges Portmann, *Comptes-rendus*, Xth International Otological Congress, p. 19.

Abstracts

An Operation for Draining the Saccus Endolymphaticus. Dr NOEL MOREAU, Bordeaux. (*Revue de Laryngologie*, 15th March 1925.)

Portmann's operation is described by his colleague Dr Moreau.

The saccus endolymphaticus is contained in an oval depression on the posterior surface of the petrous bone, between the prominence of the posterior semicircular canal in front and within, and the descending portion of the sigmoid sinus behind and externally. Its long axis is directed downwards, backwards, and outwards, and is stated to measure from 1.5 to 2 cm. The short axis does not exceed 1 cm. The thickness of the sac varies between 0.5 and 2 mm. In old people it is often atrophied except for the upper and inner angle where it joins with the ductus endolymphaticus at the entrance to the bony aqueductus vestibuli. It is completely enclosed in a fold of dura mater. The layer between the sac and the petrous bone consists of dense connective tissue, easily detachable from the bone except in the neighbourhood of the opening of the aqueductus vestibuli. Overlying this, below the sac, is a layer of soft areolar tissue, "a veritable mattress on which the sac rests." The cerebellar face is covered by a very delicate layer of lamellar tissue continuous with the dura mater, in such a manner that there is nothing to distinguish the area occupied by the sac when viewed from the posterior fossa, though a yielding spot may be detected by palpating the dura mater by the finger.

The following are the relations of the sac, the envelope of dura mater intervening:—

In front the bone covering the vestibule, and further outwards, the antrum *behind* the digastric lobe of the cerebellum. The *inferior external half circumference* is in intimate relationship with the sigmoid sinus, from which it is only separated by loose connective tissue. The *superior internal half circumference* narrows down into the ductus endolymphaticus where it passes below a lip of bone. The sac, in direct communication with the internal ear through the duct, forms part of the labyrinth "of which it may be said to be a vast intracranial prolongation."

Increased pressure of endolymph may be the result, on the one hand, of inflammatory conditions of the labyrinth (serous labyrinthitis), or, on the other, of increased intracranial pressure from whatever cause arising. The author compares this condition of increased pressure to glaucoma in the eye, and its results are comparable in seriousness to those of glaucoma. The symptoms to which it gives rise are vertigo, tinnitus, and deafness ("the triad of Ménière"). He considers the rational treatment in severe cases is drainage of the sac.

The sac can only be approached along the posterior face of the petrous pyramid. The operation proposed is in three stages. (1) Chiselling away the lower part of the mastoid, so as to expose the

Nose and Accessory Sinuses

sigmoid sinus low down near its entry into the jugular foramen. The antrum should be as little disturbed as possible, for fear of opening up a channel of infection from the middle ear. (2) The sinus is pushed inwards, and slightly upwards, and protected by a special retractor. The crest of bone between the sinus groove and the "fossette endolymphatique" is carefully removed by a fine chisel or graving tool. The space through which the sac is approached is restricted externally, and in front by the facial canal, and above by the labyrinth. The dura mater is detached inwards and slightly upwards, up to the point at which it is found to be adherent at the mouth of the aqueductus vestibuli. (3) The sac is explored by means of a fine needle attached to a syringe, inserted close to the "zone of adherence," and subsequently opened by a fine knife. The incision should be not more than 2 to 3 mm. in length.

The object of opening the sac close to its junction with the duct is that in the elderly subject this may be the only patent portion. Incision further outwards may simply penetrate the meninges.

G. WILKINSON.

NOSE AND ACCESSORY SINUSES.

The Respiratory and Circulatory Reactions to Olfactory Stimulation.

Professor ARNALDO MALAN, Turin. (*Archives Internationales de Laryngologie*, June 1925.)

The object of the author's research was to find a method of recording objectively the olfactory power of a patient who alleged that he had become anosmic as a result of his employment or through war service.

The method consists in noting the effect of odoriferous substances on the respiratory and cardiovascular centres.

The patient is seated with the eyes bandaged, and the test substances are presented to the nostrils for a given length of time. A sphygmograph is placed over the carotid artery and a pneumograph over the thorax. The tracings are recorded on a revolving drum.

The test odours employed were essence of violets, scatol, and acetic acid. The last substance was added on account of its irritative as well as its olfactory property.

The author analyses the results obtained in different classes of case.

MICHAEL VLASTO.

A Whistle of Naso-pharyngeal Origin produced while Talking.

Dr JACQUES. (*L'Oto-Rhino-Laryngologie Internationale*, February 1925.)

A man had been told by his friends that, for some six months or more, he sometimes whistled while speaking. The phenomenon was intermittent at first, but later became so persistent that he shrunk from

Abstracts

talking. Removal of the enlarged posterior end of an inferior turbinal produced no improvement. The whistle was high pitched and metallic, resembling the sound of a galton's whistle. Nasal consonants were most active in producing the whistling which seemed to come from the upper regions of the nasal cavities. Closing both nostrils entirely checked it.

Examination showed narrow nasal passages with a septal crest and some enlargement of the turbinals. There was no abnormal secretion or septal perforation. Naso-pharyngeal examination showed fibrous remains of an adenoid mass forming a membranous curtain with thin edges and a central pit in the region of the pharyngeal bursa. The condition was almost certainly one of inflammatory membranous adhesions uniting the two lips of the pharyngeal bursa, the sound being produced by the passage of the current of air obliquely across the narrow opening. Destruction of the membrane with the galvanocautery produced a cure.

A. J. WRIGHT.

On the Development of Nasal Polypi. O. HIRSCH, Vienna. (*Zeitschrift für Hals-, Nasen-, und Ohrenheilk.*, Vol. xi., Part I., March, p. 78.)

From the observation of the condition of the lining of the maxillary antrum, as revealed by radical operation, in a series of cases of nasal polypi, Hirsch comes to the conclusion that recurring polypi indicate the presence of catarrhal inflammation of one or more accessory sinuses. The catarrhal inflammation referred to is the effusion into the tissues of the mucosa described by Zuckerkandl, producing an œdematous swelling which may spread into the nasal mucosa and lead to the formation of a polypus. In rarer cases the œdematous mucosa may bulge through the ostium and form a polypus with a long pedicle as seen in the choanal form. The most frequent place of origin of recurring polypus is said by Hirsch to be the maxillary antrum and not the ethmoid cells. After the free opening of the antrum the polypi generally shrivel up. He cautions against the assumption that the antrum is sound on the strength of a negative result with exploratory puncture.

JAMES DUNDAS-GRANT.

The Present State of our Knowledge of the Pathology of Atrophic Rhinitis. E. HALPHEN and R. SCHULMANN. (*Archives Internationales de Laryngologie*, April 1925.)

The authors deny the accuracy of the theories that have been advanced as to the causation of ozæna, and are sceptical as to the results alleged to have been obtained.

The purpose of the paper is to put on record the known facts about the pathology of ozæna and to discard the theories.

They first discuss the supposed microbial origin of the disease

Nose and Accessory Sinuses

which they find a difficulty in accepting in view of the onset of the disease at puberty, and its predilection for the female sex. They have been unable to reproduce the disease by inoculating animals with the crusts and organisms found in ozæna.

Various theoretical causes such as the anatomical, the infected sinus, the tuberculous and the endocrine are analysed and refuted.

The authors adduce arguments to suggest that the disease may be due to a lesion of the sphenopalatine sympathetic system. They submit that experimental work on the stimulation and destruction of the sphenopalatine ganglion may produce fruitful results.

MICHAEL VLASTO.

On the Results achieved by Operative Treatment of Ozæna. Y. MEURMAN, Helsingfors. (*Acta Oto-Laryngologica*, Vol. vi., fasc. 3/4.)

The writer has operated upon thirty-four cases of ozæna according to Halle's method of narrowing the nasal passages, and on four cases by Wittmaack's procedure for supplying salivary secretion to the nasal mucous membrane. Two cases in addition were operated upon in which Halle's method was used on one side of the nose and Wittmaack's on the other. He concludes that Halle's operation, although not the ideal, is nevertheless a suitable therapeutic measure.

Wittmaack's operation should not be done on both sides, but if possible should be combined with a narrowing operation on the other side, and further should be avoided where the sense of smell is retained.

H. V. FORSTER.

Chronic Nasal Sinus Inflammation. W. J. HARRISON. (*Practitioner*, April 1925.)

The headache associated with chronic sinus affections may be produced by several different factors, among others by pressure of the enlarged middle turbinal on the septum. If relief is obtained by inhalations or by applying cocaine and adrenalin, the nasal origin of the headache is confirmed. General malaise and lack of energy with a tendency to neurasthenia may indicate a latent sinus infection.

It is now the rule in cases of rheumatism and arthritis to investigate teeth, tonsils, and the intestinal function; but the nasal sinuses are often overlooked. The paper is a plea for attention to these sinuses in many diseases of obscure origin.

T. RITCHIE RODGER.

Endo-nasal Trepanning of the Frontal Sinus in Acute and Chronic Sinusitis according to Halle's Method. WILHELM NASIELL, Stockholm. (*Acta Oto-Laryngologica*, Vol. vii., fasc. I.)

After referring to the various anatomical conditions of the frontal sinus, particularly as regards its approach from the nose, indications for Halle's operation are described and details of the technique given.

Abstracts

In discussing the risks of the operation, illustrations of burrs are referred to—these instruments are designed so that they may be used to widen the fronto-nasal duct, but are not likely to injure the posterior sinus wall should they accidentally come in contact with it. One of the instruments shown has been discarded because of this danger. Care is taken to avoid working in a backward and upward direction, and, by repeated interruptions, the generation of heat likely to cause bone necrosis is avoided. The burr is changed from time to time for one of larger bore. So far the author has had excellent results from this method of Halle.

H. V. FORSTER.

Operations on the Frontal Sinus with the setting up of a broad Communication between the Frontal Cavity and the Nose by means of a Mucous Membrane Flap and the avoidance of Injury to the Mucous Lining of the Sinus. R. BÁRÁNY, Upsala. (*Acta Oto-Laryngologica*, Vol. vii., fasc. 1.)

The Killian operation on the frontal sinus and its modifications seek to combine (1) obliteration of the cavity with (2) free communication into the nose. Bárány remarks upon the difficulties of success in these two important points and describes his method in which the diseased mucous membrane of the sinus is preserved and encouraged to recovery, good drainage being provided by a free communication with the nose in such a way that mucous membrane lines the whole track from frontal sinus to nasal cavity.

The cavity of the sinus is opened from below, but in addition an opening is made in its anterior wall sufficiently large to provide inspection of the cerebral wall; a substantial bridge is preserved, and it is not considered necessary to inspect lateral extensions of the cavity. Mucous membrane is treated with great care, and in the communication with the nose a flap is turned medially so that the partly removed fronto-nasal process is covered by this flap of mucous membrane. Granulation formation and stenosis are thus avoided.

H. V. FORSTER.

Defects of the Cribriform Plate and Meningitis. Drs H. DAHMANN and H. MUELLER. (*Zeitschrift für Laryngologie, Rhinologie, etc.*, April 1925.)

When operating in the ethmoid region of the nose, one must always bear in mind the possibility of injury to the lamina cribrosa, and even the most careful surgeon will at some time during his career be faced with a post-operative meningitis, where the infection has entered through the cribriform plate. The authors present an exhaustive study of this subject with an extensive literature, obviously the result of painstaking research.

Nose and Accessory Sinuses

The occasional occurrence of *congenital* defects of the lamina cribrosa is mentioned, with the post-mortem findings in a case where meningitis followed an attack of influenza, all the accessory sinuses being healthy. At the post-mortem examination it was found that the left cribriform plate was extremely thin, and its surface showed several small congenital defects each about 4 to 6 mm. wide. If the defect is larger an encephalocele may be present, and the case of a boy is reported, where a polypoid tumour was removed from the right nasal cavity; death followed four weeks later from meningitis. The tumour was an example of an "intranasal encephalocele" through a large congenital defect of the lamina cribrosa. These cases fortunately must be very rare. The congenital defects are distinguished from those produced by trauma or by caries, by the fact that the bony edges of the opening are *smooth*.

After the congenital defects the authors consider those produced by (a) *caries of bone*, secondary to chronic ethmoid suppuration; next, defects occurring as the result of (b) *accidents*, such as fractured skull, gunshot wounds, and lastly, traumatic defects caused by (c) *operation*. They state that it is extremely rare to find the development of an anterior fossa meningitis, purely as a result of caries of the cribriform plate or of the roof of the ethmoid labyrinth. Many of the cases reported in the literature do not survive searching criticism; there was nearly always some intranasal operation, and the possibility of trauma to the region of the cribriform plate can hardly ever be altogether excluded.

An interesting form of accidental injury is an actual bursting of the lamina cribrosa, as a result of sudden tremendous atmospheric pressure in connection with mine explosions. Several cases were observed during the war.

Another point of interest which is discussed, is the fact that a long-time interval may intervene between the injury, usually a fracture of the skull, and the development of a fatal meningitis; months or even years may elapse during which time the patient is apparently well. Then very suddenly a meningitis supervenes, the infection usually arising from the nasal cavities. Five years is the longest interval that has been reported as elapsing between the accident and the development of a fatal meningitis.

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