developed child. No cyanosis or stridor, but a marked "asthmatoid" inspiratory wheeze was audible at some yards. Chest clear, with good air entry on both sides. X-ray examination was not practicable, as the child could not be kept quiet.

Bronchoscopy.—A 5-mm. Jackson tube was passed without anæsthesia. The flake of bone was found at the entrance to the left bronchus. It was acting as a "butterfly" valve—turning on its axis with respiration, almost blocking the bronchus on inspiration, but presenting its edge on expiration, and so allowing the air to pass out. The fragment was grasped with forceps and the combined tube and forceps removed together. The child made a rapid recovery. Exact measurements of the flake of bone are 9 by 6 by 3 mm.

The case illustrates the great clinical value of the sign "asthmatoid wheeze," described by Chevalier Jackson.

ABSTRACTS

EAR.

Simple Subcortical Mastoidectomy. JULIUS LEMPERT, New York. (*Mschr. Ohrenheilk*, Year 63, Vol. i.)

Under this attractive title, the author gives a detailed account, supported by 29 most interesting illustrations, of an operation which he has devised and practised as a drainage of the middle ear and radical exenteration of the various mastoid cell groups for acute otitis media, based on 165 cases.

The operation consists essentially in a radical mastoidectomy via the posterior meatal wall. A preliminary injection of cocaine and adrenalin is made under the soft parts in this situation (this merely as a hæmostatic, since the procedure is carried out under a general anæsthetic), followed by a vertical incision of the posterior meatal wall as near as possible to the posterior attachment of the tympanic membrane, from the upper and lower extremities of which two more or less horizontal incisions are continued outwards, terminating together at the lower extremity of the helix. With this, a large triangular portion of the soft parts of the meatal wall is removed. The aditus is entered with a burr and thence the antrum is opened—the external aspect of the horizontal semicircular canal is then exposed, and followed by the exenteration of the zygomatic cells and the supra and infra-sinous and apical groups of cells—the whole operation being performed with an engine-driven burr. The cavity thus exposed is finally packed with gauze and allowed to granulate.

The author contends that this is a far more simple proposition than the usual post-aural operation—that it avoids disfiguring scars—that it reduces the healing period, and, in his opinion, should entirely supersede the usual operation based on Schwartze's particular method.

Naturally, many questions arise in criticism of this suggestion, and it is certainly a little difficult to visualise that such an approach and procedure can possibly offer that detailed radical removal of what is often a most extensive infection of the various cell groups of the mastoid process, which "radical" treatment of the same has been so well emphasised by Neumann during the past three years.

It is of course quite true, that in some cases a simple antrotomy may be sufficient to establish post-aural drainage and allow the infected mastoid cells to recover, but most of us know only too well that this alone may often lead to recurrence of infection and persistent fistulæ.

Furthermore, one cannot help recalling that in a large number of cases that require such operation, the swelling of the meatal walls sometimes may completely preclude any view of the tympanic membrane — under which circumstances, such intrameatal incisions would seem to be extremely difficult.

Furthermore, the position of the lateral sinus will at once appear as an added complication, especially in such cases where it lies in almost immediate proximity to the posterior meatal wall; and it is rather surprising to find the author stating that the sinus is usually situated further from the posterior meatal wall than the cortex of the mastoid, and that it is thus less liable to injury by his method of operation, or, if injury occurs, the injury is more likely to take place at the end of the operation, and thus prove less of an obstacle to the proper treatment of the mastoid cells.

Of the 165 cases operated on by his method, in 158 convalescence was uncomplicated. Of the 7 cases with complications, 3 had sinus-thrombosis, 2 cases developed a purulent meningitis and died, 1 case had septic pneumonia with empyema, and 1 case contracted broncho-pneumonia.

This list certainly compares very favourably with the 165 other cases operated on by the more usual post-aural method, in which list, 5 patients developed sinus thrombosis, 4 cases erysipelas, 16 cases cervical adenitis, 3 cases cellulitis of the scalp, 1 case torticollis, 8 cases eczema around the post-aural wound, and 5 cases purulent meningitis; but one can hardly admit this particular latter series as generally representative.

He further claims that the healing period is much reduced and takes place in between three to eight weeks, or on the average in five weeks; a point of minor importance, when we reflect that the dual object of the operation is to save life and preserve function.

The article is well worth while examining if only for the excellence of the illustrations indicating the various steps in the operation, by which illustrations, indeed alone, the method can be easily followed; but, it is most doubtful whether such a suggestion for approach will be regarded by otologists as the operation of choice for acute purulent mastoiditis. ALEX. R. TWEEDIE.

A Contribution to the Study of Scarlatinal Otitis and its Complications in Children. A. LEMARIEZ. (*Ann. des Maladies de l'Oreille, etc.*, November 1928.)

The writer of this comprehensive and most interesting article bases his conclusions on a series of 686 cases of scarlet fever, seen in a period of $2\frac{1}{2}$ years. They are as follows:—

Two forms of otitis may occur in the course of scarlet fever, the grave or necrosing, and the benign. The necrosing form is due to the streptococcus and has become rarer since antidiphtheritic serotherapy has suppressed the formidable late streptodiphtheritic anginas; it is now seen only in the early malignant anginas. It is a grave condition because the necrosis generally extends suddenly to the mastoid and sometimes even to the internal ear, where, contrary to the classical opinion that scarlatinal labyrinthitis is a benign condition, fatal acute labyrinthitis may occur. An interesting point is the long persistence of streptococcal virulence which may cause fatal endocranial complications; once, however, the streptococcus disappears separation of sequestra takes place in a benign manner. Sudden diffuse necrosis and persistent streptococcal infection in an oto-mastoiditis demand early and extensive operation on the mastoid and rapid sterilisation of the wound cavity. In the latter respect happy results have been obtained by the employment of filtrates of streptococcal cultures, which bring about an efficient local vaccination. Good results seem to be attained by the local application of ultra-violet rays.

When the stage of streptococcal virulence has passed radical cure of the otorrhœa should not be undertaken until sequestration has become limited.

The benign otites may occur at an early stage in the milder forms of scarlet fever, but are more often met with about the twentieth day. The causal agent is usually of mild virulence and produces an otitis only because of a previously defective condition of the nasopharynx, particularly adenoid vegetations. Here treatment consists in systematic adenoidectomy. Scarlet fever is rare in children with adenoids removed; in such cases it appears in less severe forms and the syndrome of secondary infection is rare.

Curative adenoidectomy should be carried out about the fourth

week, and before the child leaves the isolation ward. It offers the following advantages :—

(1) *Local.*—It prevents the otitis passing to the chronic stage.
(2) *General.*—It cuts short the pharyngeal sub-infection which favours renal affections, rheumatic attacks, and the sub-acute adenopathies of the convalescent stage.
(3) *Social.*—It suppresses scarlatinal carriers.

An extensive bibliography is added, including particularly the reports of English and American otologists at fever hospitals.

L. GRAHAM BROWN.

Atti della Clinica Otorinolaryngoiatrica di R. Universita di Roma. Edited by Professor GHERARDO FERRERI, Anno xxvi., 1928.

This volume of some 540 pages consists of twenty-nine articles of which twelve deal with the ear and its associated structures.

Professor Mosso has investigated the permeability of the tympanic membrane. He finds that opium, cocain, and carbolic acid instilled into the meatus caused hypo-excitability of the vestibule. He placed a solution of potassium in the meatus and found that it was execreted in the saliva in periods of a few hours to two days. Mosso thinks that there is a communication between the lymphatics of the external ear and membrane and those of the middle and internal ears. Szineta reports thirty-four cases of tuberculous otitis media in sanatorium patients. In infants the disease reaches the ear by the blood stream, in adults it is almost always by the Eustachian tube. The characteristics are a painless onset of a copious muco-purulent discharge, a degree of deafness out of all proportion to the amount of change in the middle ear, and a very chronic course. Extra-auricular complications are said to be very rare. Gherardo Ferreri describes the type of case where there is persistent discharge from the middle ear and attic and where the mastoid is very dense, almost acellular, and where the lateral sinus is very far forward and is almost in contact with the posterior wall of the bony meatus. Buccelli describes with microscopical sections cases of true and false ankylosis of the malleo-incudal joint. Giuseppe Vidau relates a case of sinus thrombosis occurring after a mastoid operation in which cure was effected by ligaturing the jugular vein.

Vittoria Aprile records a case of abscess of the temporo-sphenoidal lobe following chronic otitis media. There was also a commencing abscess in the opposite temporo-sphenoidal lobe and the track by which the infection had crossed the middle line could be plainly seen in the substance of the corpus callosum. The symptoms were puzzling and localisation had not been achieved.

Abstracts

Salvatore has grouped the various types of cerebrospinal fluid found in complications of middle-ear disease. He recognises that of serous meningitis—a clear fluid with a few normal polynuclear cells and no chemical or bacteriological changes, but with a slightly increased pressure. The aseptic purulent meningitis of Widal has opalescent or turbid fluid with definitely increased pressure, unaltered cells, and marked chemical reaction, but with no free micro-organisms. Septic purulent meningitis has the same physical characteristics of the fluid, but the polynuclear cells are altered, some are dead, and there are live micro-organisms. A clear fluid under greatly increased pressure with slightly increased albumin and globulin, with decrease of reducing power and few cells, but with live micro-organisms, indicates a septic non-purulent meningitis with a very bad prognosis. Buccelli describes three cases of the aseptic purulent meningitis which all recovered after a radical operation on the ear and repeated lumbar puncture.

Giorgio Ferreri describes a syndrome of headache, vertigo, tinnitus, and disturbance of vision in cases which had changes in the cervical vertebræ. The symptoms are thought to be due to irritation of the sympathetic nerve fibres passing through the vertebral canals. The same author describes researches in the histology of rhinophyma. He finds a layer of infiltration around the deeper parts of the sebaceous glands, with a very marked network of reticular fibres, and among the round cells of the infiltrated area occasional giant cells. Massione describes the microscopic appearance of cysts in the mucous lining of the ethmoid cells, and Vidau two cases of sarcoma of the ethmoid mass. Catania records a tumour of the nasopharynx which consists of a reticular fibre formation and a large proportion of cells. He calls the tumour a reticuloma. He also describes the case of a woman of seventy-two with deep and rapidly-spreading ulceration of the tonsils. Tubercle bacilli and also the fuso-spirillary organisms of Plaut-Vincent were found in the ulcers, and though the ulcers were really tuberculous Catania thinks that the organisms of Plaut-Vincent were responsible for the rapid devolvement. There was infiltration and caseation around the ulcer but very little reaction elsewhere. Manicelli records a case of miliary tuberculosis of the pillars of the fauces, the tonsils, and the posterior wall of the pharynx. There was no ulceration but there was a tuberculous laryngitis. The condition spread rapidly, and death from disseminate miliary tuberculosis occurred. The author considers the faucial manifestation uncommon. Buccelli records a case in which herpes zoster of the right side of the face, corresponding to the second and third divisions of the trigeminal nerve, was associated with herpes of the right half of the epiglottis. Vidau mentions a case of an epithelial tumour with filiform process projection from its surface. Staina describes six cases of laryngeal tumours, which

were large enough to occupy a great portion of the glottis. They showed very considerable new formation of blood vessels with hæmorrhages in some cases. In one case there was a large thrombus in the centre of the tumour. They cause not only hoarseness and dyspnœa but also hæmorrhage from the throat. All these cases were benign in nature and were polypoid rather than papillomatous. Bilanchioni records the case of a child who inhaled a piece of stone. This object stuck at the bifurcation of the trachea. Dyspnœa was marked and attempts to remove it having failed, preparations were being made for a low bronchoscopy when respiration suddenly ceased. A rapid tracheotomy was performed, there was a very violent cough and the stone was projected through the glottis into the pharynx and was then swallowed. F. C. ORMEROD.

Statistical and Clinical Study of Deaf-Mutism among the Chinese. T. UEHIDA. (*Zentralblatt f. Hals-, Nasen-, und Ohrenheilkunde*, 1928, xiii., 167.)

The author reports on the examination of 369 deaf-mutes. In 10,000 Chinese he found 4 deaf-mutes on an average. The condition is commoner in males. In 50.14 per cent. of cases deaf-mutism was hereditary, in 40.65 per cent. definitely acquired, in 9.12 per cent. the history was obscure.

The commonest cause of acquired deaf-mutism was epidemic cerebrospinal meningitis, then scarlet fever, meningitis simplex, head injuries, influenza and whooping-cough.

Uehida found that the deaf-mutes were poorly developed physically and mentally; and in the true congenital deaf-mutes there were often associated developmental errors, such as hare-lip or cleft palate.

High tones were heard better by congenital deaf-mutes. Spontaneous nystagmus was only observed in cases with persistent islands of hearing, never in complete deaf-mutism. The caloric nystagmus was prolonged. Galvanic testing showed that the function of the nerve and of Deiters' nucleus was preserved. No laryngeal abnormalities were found.

F. W. WATKYN-THOMAS.

Is Malnutrition Primary or Secondary to Ear Involvement when the two are Associated? T. H. ODENEAL. (*Archives of Oto-Laryngology*, Vol. vii., No. 6, June 1928.)

This paper is a sequel to one previously published on Otitis Media, Mastoiditis and Disease of the Nasal Accessory Sinuses as Causative Factor in Malnutrition in Children.* Further investigations have been carried out following the reports of a pathologist, who as a routine practice opened the mastoids and sinuses in every autopsy in cases of

* *Ann. Otol. Rhin. and Laryng.*, xxxii., 561, 1923.

malnutrition. The findings are given for over 300 autopsies: in 80 per cent. there was pus in the mastoids, and in 50 per cent. in the sinuses. Patients who were thought to be beyond hope of recovery under the present mode of treatment, were experimented on. Mastoidectomy was performed, evidently at first by the usual simple operation with posterior drainage. Dressings took so much time and had severe effects on the patients, that a flap operation was resorted to in later cases. This operation was described by the author in the *Archives of Oto-Laryngology*, iii., 43, 1926. The results were more satisfactory on account of improved drainage, less frequent dressings, and hastened healing. The mortality rate was lowered.

The inference drawn from these cases was that the involvement of the mastoid was a primary cause, and was not secondary to the malnutrition. The results of experiments on rats were forwarded to the writer. Vitamin A was withheld from the animals' diet and the accessory sinuses examined after the lapse of some time. Suppurative sinusitis was found. The mastoids were not investigated, but the writer feels certain that pus would have been found there also.

From these experiments the author now considers the malnutrition to be primary, and that, by lowering the patient's resistance, it allows infection of the ears and sinuses to take place. He states that cases of malnutrition without focal infection do well when placed on correct diet. Where there is an added infection assimilation of the nutriment is prevented and death occurs.

Case reports illustrative of these facts are given. The conditions of the drum are described in cases of primary malnutrition and also in cases of secondary infection.

The difficulty of knowing when to operate in such cases is discussed. Opposition to opening the mastoid in cases of malnutrition exists but the author states that he has undoubtedly saved several children. This condition is never seen at Ear Clinics; the patients all go into children's hospitals, and he pleads for a closer co-operation between the otologist and the pediatrician.

In conclusion, several obvious questions that would arise from his statements are answered in logical manner. C. E. SCOTT.

A Study of the Fossa Subarcuata as a Passage-way for Infection from the Labyrinth to the Cerebellum. DAVID L. POE, M.D., New York City. (*Annals of Otology, Rhinology, and Laryngology*, December 1928.)

Not many cases have been reported of infection passing to the brain from the ear by way of the fossa subarcuata. The author therefore wishes to record such a case, where on post-mortem examination it could safely be said that the fossa subarcuata was

the passage through which the infection found its way from the ear into the cranium. When the brain was slightly raised from its bed, a direct avenue of communication was seen leading from the cerebellum to the internal ear through the fossa subarcuata. Pus was clearly seen to pour through the fossa into the interior of the cranium. The opening constituting the fossa was quite large, the edges were rough and denuded of substance. The internal acoustic meatus was normal, as were also the tegmen tympani and tegmen antri. A microscopic study of the petrous bone showed that, while the fossa subarcuata was the main passage for the pus, other communicating channels existed, a point which convinces the author that macroscopic observations alone are insufficient for pathological diagnosis. A detailed description of the microscopic findings in the labyrinth, which was full of pus, is given.

Reference is made to Dr Fremel's study of the development of six cases of otitic cerebellar abscess where he shows that an infection passes through the cerebellar cortex at that place where it is in contact with that part of the temporal bone where necrosis exists and, instead of penetrating and destroying the cerebellum in all directions, the organisms, as soon as they gain entrance, spread out in a fan shape, destroying the medullary substance in a more or less flat manner, without attacking the cortex.

The author gives the results of the study of a series of infant temporal bones and of adult specimens with reference to the fossa subarcuata. In adult specimens with persistent embryonic fossæ, he found the fossa as a deep depression of varying shape, in the floor of which were several foramina leading through to the labyrinth. In such bones there must always be a menace to life. In most adult bones, however, the fossa subarcuata is obliterated or exists only as a small depression lodging a process of dura mater.

NICOL RANKIN.

Facial Paralysis associated with Acute Otitis Media. From the Department of Oto-Laryngology, Mt. Sinai Hospital, Chicago. S. M. MORWITZ, S.B., M.D. (*Annals of Otology, Rhinology, and Laryngology*, December 1928.)

Facial paralysis, occurring as it does in less than 1 per cent. of cases, is not a common complication of acute otitis media. From a study of the literature and from his own experience the author concludes that in such cases the treatment is essentially that of the ear condition *per se*, and the paralysis as a complication is not necessarily an indication for operation.

The cause of the paralysis is compression of some kind—exudate within the Fallopian canal, etc., rather than any direct involvement of the nerve from the surrounding sepsis. In support of this the author

quotes the experiences of Ney who, in a great number of war wounds, demonstrated that an intact nerve is very resistant to surrounding suppurative processes but susceptible to minor degrees of compression.

In children and infants a facial paralysis coming on during an acute otitis media, before rupture of the membrane, indicates tuberculosis.

Prognosis is good although the recovery from the paralysis may be slow. According to E. B. Jones and J. H. Leiner, if the lesion is limited, its site in the canal can be determined as follows:— 1. Involvement of geniculate ganglion alone is manifested by herpetic eruption in the external auditory canal and outer ear and neuralgic pains in the ear. 2. If above the ganglion, sense of taste is not disturbed. 3. If above the point of origin of the chorda tympani and below the branch to the stapedius muscle, the sense of taste in the anterior third of the tongue is affected, with excessive flow of saliva. 4. If above the twig to the stapedius there is, in addition, severe tinnitus and hyperacusis. NICOL RANKIN.

Scalp Tenderness as an Indication of Dural Involvement in Mastoiditis. O. JASON DIXON, M.D., Kansas City. (*Annals of Otology, Rhinology, and Laryngology*, December 1928.)

The author reports a number of cases of acute otitis media in which the chief symptom has been scalp tenderness accompanied by shooting pains in the eye and intermittent shooting pains deep within the ear.

On operation his attention has been directed to the marked zygomatic destruction and extension upwards and forwards from the antrum into, and involving the dura of, the middle fossa. Prompt relief follows the mastoidectomy and thorough exposure of dura, and he has been able to reproduce this symptom of dural irritation by packing snugly against the dura following operation. The author therefore looks on this scalp tenderness, when a predominating symptom, as an indication for exposure of the dura of the middle fossa at the operation, as an additional indication for mastoidectomy, and as an aid in the diagnosis of extradural abscess.

A review of the anatomy of the fifth nerve is given at the end of the paper which helps to explain why a patient with involvement of the dura of the middle fossa should have a tender scalp.

NICOL RANKIN.

On the Mechanism of Subjective Tinnitus. Dr CHAROUSEK, Prague. (*Zeitschr. für Laryngologie, Rhinologie, etc.*, Bd. 17, January 1929.)

In a paper read at the Annual Meeting in Düsseldorf (1928) Charousek described his researches on the stimulation of the vestibule by means of strong compression and aspiration of the column of air

in the meatus. This is done by a special apparatus. Under these conditions the "fistula sign" can often be obtained when the drum is intact.

The cochlea is also stimulated when this pressure is set up, and cochlear irritation shows itself by subjective tinnitus. It was found in addition that existing tinnitus sometimes disappeared temporarily after strong aspiration. These observations are a clear proof that the pressure conditions in the cochlea are concerned with tinnitus.

Under normal conditions the cochlear fluids are constantly subject to slight variations in pressure. Apart from the pulse and respiration, variations occur with every act of bending, rising, swallowing (Eustachian ventilation), etc. In the *healthy* ear where all the parts are freely movable these variations in pressure are easily compensated and do not cause tinnitus.

When the ear is *diseased*, this pressure regulation may or may not suffer, this depending entirely on the localisation of the defect. *E.g.* an extensive cholesteatoma, a mastoiditis, a labyrinth fistula may not interfere with this mechanism. On the other hand, a plug of cerumen pressing on the tympanic membrane, chronic Eustachian obstruction, otosclerosis, etc., do interfere with pressure regulation, as the mechanism depends on the mobility of the ossicular chain and of the drum. In the latter conditions, therefore, physiological variations in pressure are no longer compensated, tinnitus arises and gradually becomes persistent.

Apart from the middle-ear structures and their mobility, one other factor enters into the pressure regulation, viz., the *contractility of the cochlear vessels.* By mere alteration of their volume these vessels can compensate slight pressure differences. Therefore if the vessels are pathological, tinnitus will arise all the more readily.

Several patients were relieved of their tinnitus by repeated applications of the compression and aspiration, and the author makes very tentative suggestions with regard to treatment. J. A. KEEN.

NOSE AND ACCESSORY SINUSES.

Contribution to the Clinical and Anatomo-pathological Study of Cylindroma of the Superior Maxilla. GEORGIO FERRERI (Rome). (*Acta Oto-Laryngologica*, Vol. xii., fasc. iv.)

Few tumours possess a literature so well known and so varied as the cylindroma, and opinions about their origin differ widely. Are they epitheliomata or connective tissue tumours? Are they clinically benign or malignant? and what kind of surgical treatment do they merit?

Such indecision results from the name applied to them. Bilroth gave the name cylindroma to describe the neoplastic forms he had observed in them, hyaline colloid masses of spherical or cylindrical form.

Under the term cylindroma, however, one might place many tumours; for example, all the varieties of tubular sarcoma, of endothelial sarcoma, and of hyaline endothelioma, and in this class also could be placed interfascicular endothelioma, basal celled carcinoma, and keratinised, but not adenogenous, tubular carcinoma.

Cylindromas merit careful study in our speciality particularly because of their tendency to grow in the head area, and they often show themselves favourably influenced by radium and X-rays, if associated with rational surgical treatment. In general, the cylindroma is found in regions with a tendency to anomalies (neck, face, sacro-coccygeal region, uro-genitary apparatus). In oto-laryngology, the palate, the nasal fossæ, the bones of the face and nose, the salivary glands, orbit, meninges and the lacrymal glands. A congenital one was found by Thrane in the left tonsil. Sigura found one in the trachea.

Cylindromas are circumscribed tumours with a capsule, but when they occur in the upper jaw, as described by the writer, the capsule is always faulty. The cylindroma takes position between malignant and benign tumours. It does not infiltrate but compresses. It grows so slowly that early signs are obscure. Metastases are not found, but local recurrences occur. One should carry out as radical a removal as possible, also using radium and X-rays, and repeating the application for months afterwards.

The author describes in detail three cases of his own. Two are cylindromatous endothelioma of the palate, the other cylindromatous perithelioma of the upper jaw. He gives the opinions of many writers concerning the micropathology of this group of tumours, and their views as to the origin of the hyaline substance. Several micro-photographs are illustrated.

In conclusion, cylindromas are regarded primarily as endotheliomas, either of blood or lymphatic vessels, which instead of developing into typical growths composed of innumerable lymphatic or blood vessels, fail to attain maturity and suffer hyaline change, to such an extent in certain cases that the cylinders of muco-colloidal reticulum reach very large proportions, so that they are likely to be mistaken for adenomato-cystic tumours, such as adenomata of the thyroid.

H. V. FORSTER.

Sarcoma of the Nasal Bones. Subtotal Removal of the Nose and its Reconstruction. W. T. COUGHLIN. (*Archives of Oto-Laryngology*, Vol. vii., No. 6, June 1928).

Fear of mutilation, the author states, is a powerful factor in causing delay of proper treatment for many surgical conditions, otherwise a much larger proportion of cancer cases would be available for earlier

treatment. A plea is made for more attention being paid to reconstruction work—the ideal of course being *restitutio ad integrum.* If plastic reconstruction was more widely practised many more patients would accept early operation. The time involved by the various stages of reconstruction is also a deterrent. The author maintains that tumours of the septum, ethmoidal or sphenoidal cells, and of the nasopharynx or maxillary sinus, are not tumours of the nose in the ordinary sense. He has only seen one case out of many examined where the frame or wall of the nose was involved. The bad prognosis of sarcoma is noted, especially that of the round cell type in bone. The fact that sarcoma may exist within the sinuses for some considerable time, evading careful inspection, is also mentioned. When diagnosed, no time should be lost in commencing treatment. Radical removal offers the best prognosis; intranasal removal is condemned as unscientific.

One case is described and the operative measures fully detailed from the primary removal to the various steps of plastic reconstruction of the nose. There are also numerous photographs clearly illustrating all stages of the procedure. C. E. SCOTT.

Rhythmic Intranasal Suction with Special Reference to its Effect in Cases of Ozæna. MAX SAUTER. (*Münch. Med. Wochenschrift,* Nr. 39, Jr. 75.)

The objectionable subjective and objective symptoms of ozæna may be improved by alternatively plugging the nostrils for different periods of the twenty-four hours by means of small malleable rubber plates.

Besides the effect resulting from suction and the exclusion of the external atmospheric pressure the following advantages are claimed for this obstructive treatment.

(1) The maintenance of an equable and suitable temperature.
(2) The maintenance of moisture.
(3) Physiological rest.
(4) Withdrawal of the bacterial, toxic, chemical, and other impurities of the inspired air.
(5) Altered consistency of the air in the closed half of the nose (almost complete absence of oxygen with an increase of carbonic acid and nitrogen). J. B. HORGAN.

An Instrument for the Introduction of Grafts when Correcting Cases of Saddle-Nose. ERNST EITNER. (*Münch. Med. Wochenschrift,* Nr. 44, Jahr 74.)

Eitner inserts his grafts from an incision in the septum on the inner edge of the columella. A passage is made along the lower border of the medial crus of the greater alar cartilage where it bends at right

angles about the knee of this structure. It then proceeds upwards along the back of the nose exactly in the middle line. In order to lend sufficient rigidity to the graft he uses a special forceps, the two branches of which remain parallel whilst closing. They are very thin and only actually come together at the mouse-toothed tip so that they can grasp a body of variable shape without being widely separated. The scissors-like handle is controlled by a cross-lever. An illustration of the forceps is given. J. B. HORGAN.

Conduction Anæsthesia of the 2nd Branch of the Trigeminal and of the Sphenopalatine Ganglion through the Pterygopalatine Canal. Dr T. GORDYSCHEWSKI, Moskau. (*Zeitschrift für Laryngologie, Rhinologie, etc.*, Band 17, January 1929).

This is a very important anatomical research, based on the examination and measurements of 90 skulls. The great palatine foramen and the pterygo-palatine canal are supposed to give the most direct and the most certain access to the pterygomaxillary fossa and its contents. The advantages and the dangers of this method of injection are fully discussed. A few points only will be mentioned:—

In some of the skulls one or other canal was found too narrow to admit even a very fine needle (10 per cent.).

The point of the needle can be brought within 2 to 4 mm. of the foramen rotundum in 80 per cent., but there are a good many skulls where the point of the needle comes to lie 5 mm. or more away from the opening of the foramen rotundum and where it cannot be brought any nearer by manipulations.

The situation of the sphenopalatine ganglion is marked on the skull by a small fossa just in front of the opening of the Vidian canal. This landmark is actually reached by the point of the needle in 50 per cent.

The distance between the great palatine foramen and the lower margin of the foramen rotundum was measured in 133 half-skulls. This distance varies between the extremes of 26 and 40 mm.

If the needle be pushed too far it may wound orbital veins, it may injure some of the nerves to the eye muscles, and it may penetrate into the cranial cavity through the superior orbital fissure and reach the cavernous sinus. The optic nerve is out of the way and can only be reached in very exceptional cases.

By certain external measurements of the superior maxilla it is possible to get an idea of the length of the pterygopalatine canal in any particular case. The height of the superior maxilla is given by the distance between the alveolar border in the 3rd interdental space and a corresponding point on the inferior margin of the orbit. This distance is approximately the same as the distance between the

foramen rotundum and the alveolar margin in front of the great palatine foramen. If allowance be made for the thickness of the alveolar margin, we then know the depth to which the needle has to penetrate before it reaches the foramen rotundum and the 2nd branch of the trigeminal nerve. J. A. KEEN.

Septic Osteomyelitis of the Skull. GEORGES CANUYT. (*Archives Internationales de Laryngologie*, December 1928.)

The purpose of this short paper is the study of diffuse osteomyelitis of the skull, following operations on the accessory sinuses in patients suffering from streptococcal infection.

After a brief historical survey in which the work of Mackenzie and Tilley finds mention, the author proceeds to discuss the etiological, pathological, and clinical aspects of the condition.

Broadly speaking, the destruction of bone affects chiefly the outer layer and diploe. The infection appears to be carried by the veins.

The osteomyelitic process is most liable to follow an operation on the frontal sinus or more rarely on the mastoid bone. Instead of settling down after the operation, the inflammation persists. There is a painful œdema around the wound and an abundant flow of pus. A feature of the condition is the intense headache.

A second operative intervention reveals very little, and no improvement results.

Such cases nearly always terminate by death from meningitis, septicæmia, thrombophlebitis or encephalitis. The causative organism is usually the hæmolytic streptococcus.

The article concludes with the detailed account of a case of diffuse spreading osteomyelitis of the skull following an operation on the maxillary and frontal sinuses. MICHAEL VLASTO.

A New Method of Treatment of Leprotic Infection of the Nasal Mucosa. F. G. ROSE, M.D., D.M.R.E. (*Brit. Med. Journ.*, 26th January 1929.)

In the writer's experience 70 per cent. of cases of the systemic type and some 20 per cent. of cases of the nerve type show infection of the nasal mucous membrane before treatment. The local treatment consists in ionisation of the nasal mucosa with a 1 per cent. solution of alepol, potassium iodide, and sodium chloride. A current of 20 to 30 mm. is used for twenty to thirty minutes. No lessening of the number of bacilli is apparent until ten to fourteen days after treatment. Bacilli may disappear after one to two sessions but frequently there is a relapse, and at least three sessions, generally more, at fortnightly intervals, appear to be necessary for permanent cure.

Twenty-five cases were treated and some of them have been con-

sistently negative on examination for bacilli for two months, which is the longest period that has elapsed between the conclusion of treatment and the writing of the paper.

If these results are confirmed it is suggested that in a large number of cases the duration of segregation may be considerably curtailed.

R. R. SIMPSON.

THE LARYNX.

Œdema of the Larynx following Angina. Dr H. LEICHER, Frankfurt. (*Zeitschrift für Laryngologie, Rhinologie, etc.*, Band 17, December 1928.)

In a period of two years the author observed 7 cases of œdema of the larynx following infections in the region of the tonsil and pharynx. In all these cases the œdema was severe and life was threatened by asphyxia.

In text-books of our speciality it is generally taught that larynx-œdema arises through a spread of the infection along the mucous membranes. This view is strongly contested by Leicher who gives an entirely new explanation. Infections of the tonsillar region, even if there is œdema of the anterior surface of the epiglottis, very seldom cause serious laryngeal obstruction. A ligament — the pharyngo-epiglottic (Hajek)—is said to prevent the spread of inflammation by continuity. In the rare cases where there seems to be a direct spread it is found that the inflammation really started on the lateral pharyngeal wall behind the ligament.

Leicher's explanation is as follows: the tonsillar infection causes a swelling of the lymphatic glands in the anterior triangle. These glands drain the lymphatics from the aryteno-epiglottic folds, and œdema arises through mechanical blockage of the lymph circulation by inflammatory products. Interference with the venous circulation, through pressure of the mass of glands on the internal jugular vein, has also been advanced as an explanation of larynx-œdema. The author thinks this unlikely, as no cases have been reported where œdema of the larynx followed jugular thrombosis or surgical obliteration of the internal jugular vein.

In one of the author's cases it was oberved that the œdema began on the side of the larynx where the glandular swelling was most pronounced, although the tonsillar inflammation was more severe on the opposite side. Arguing on the lines of the spread by continuity, the larynx-œdema should have shown itself first on the side of the more severe inflammation.

To summarise, the sequence is: angina, swelling of the lymph glands (tonsillar group), then œdema of the larynx coming on gradually. This discussion has an important practical result. Dr Leicher no

longer treats his cases by tracheotomy, as is customary, but by a dissection removal of the septic glands in which the lymph circulation is blocked. This allows drainage from the efferent lymph channels supplying the upper part of the larynx and there follows gradual retrogression of the œdema and of the symptoms of respiratory obstruction. J. A. KEEN.

The Treatment of Papilloma of the Larynx. Zeitschrift für Laryngologie, Rhinologie, etc., Band xvii., January 1929—p. 362, by Dr H. DAHMANN, Düsseldorf; p. 377, by Prof. H. G. RUNGE, Hamburg; p. 384, by KAI THRANE, Svendberg.

In the January number of the *Zeitschrift* there are three separate communications on recent advances in the treatment of papilloma of the larynx; these articles may well be abstracted together. Ordinary surgical removal by direct or indirect methods are not specially considered. The authors confine themselves to a discussion of various means of electro- or chemical cauterization and of X-ray therapy.

Dahmann discusses the use of diathermy for this condition, but on the whole favours chemical cauterization by *fuming nitric acid.* He has invented a special apparatus which consists of a hollow metal tube bent like a laryngeal applicator. On this tube is fixed a small rod with a rounded asbestos terminal which is dipped into the fuming nitric acid. The rounded end lies opposite the opening of the hollow tube and a pump is set going so that the nitric acid fumes are removed during the application.

In Professor Runge's article there is a description of an apparatus which serves the same purpose. The end piece of the applicator is a hollow glass rod, as glass is not eroded by the nitric acid. In the glass tube is a platiniridium wire to which cotton wool can be fixed. The *middle* portion of the cotton wool is moistened with the fuming nitric acid and it is then withdrawn into the tube; the dry part of the cotton wool forms an effective barrier against the escape of fumes. The applicator is brought into contact with the papilloma. The patient is instructed to take a deep inspiration and then to expire slowly. During expiration the wire is pushed out of the glass tube and the cauterization is made.

Fuming nitric acid has always been recognised as the best chemical caustic for papillomata; the difficulty with this caustic is the possibility of damage to normal mucous membrane by the fumes. Both articles are illustrated.

Kai Thrane favours X-ray applications, and describes some very striking cases of cure in adults. X-ray applications in this region were brought into disrepute some years ago, as several cases were reported of severe damage to the mucous membrane and cartilage.

Runge and Thrane both state that this is due to the X-ray applications at that time being much too strong. The earlier workers used for papillomata the same strength of ray as for carcinoma, while actually far smaller doses suffice. Also, with the extremely small dosage which is used the possibility of damage to normal tissues is avoided. Runge states that X-ray therapy is much the best method of treatment for children, $\frac{1}{10}$ to $\frac{1}{5}$ H.E.D. (Hauterythema dosis) from three fields. The stenosis symptoms disappear; a similar small application can be repeated after two to three months, and no damage to the mucous membrane or cartilage need be feared.

Dr Thrane describes the case of a boy, aged 17, who had suffered from papillomata of the larynx for nine years. There had been four operations, and he was breathing through a tracheotomy tube. Ten days after the first X-ray application (small dose), the tracheotomy tube could be removed, and nine months later the larynx was normal. No recurrence after three years.

The important points about X-ray therapy are:—

(1) The use of minimal doses.

(2) The great length of time over which the effect of the application must be expected to extend.

The second point is illustrated by another adult case of Dr Thrane's, a man, aged 27. In this case, two months after a minimal dose (50 to 60 per cent. H.E.D.) there appeared to be no change in the larynx, except that the papillomata appeared "verwelkt," *i.e.* a little paler than before, but hardly any shrinking could be seen. Nothing was done for ten months. The voice had become quite normal then, the vocal cords were white and well defined, and there was no trace of papilloma.

From previous descriptions of damage to the larynx by X-rays we know that the *bad* effects do not show themselves until many months have elapsed. This observation applies equally to minimal doses of X-rays and their *good* effect in causing the papillomata to disappear.

J. A. KEEN.

THE PHARYNX.

On the Local Treatment of Tuberculosis and Lupus of the Nose, Mouth and Pharynx by U. V. Rays. A. WOSNESSENSKIJ and L. BERMAN, Moscow. (*Zeitschrift für Laryngologie, Rhinologie, etc.*, Band xvii., December 1928.)

The local application of the natural or artificial sunlight to T.B. lesions of the upper air-passages was introduced by Cemach and Wessely of Vienna, who devised many interesting forms of apparatus. Many

observers, however, believe that general light baths are equally efficient, and state that local applications are useless if not actually harmful.

The authors of the present article, as a result of their clinical experience, are strongly convinced that *local* applications of the U.V. rays are the best method in the treatment of T.B. ulcerations and of lupus in the mouth and air-passages. The local use of U.V. rays is a harmless method of applying a stimulus to the ulceration. The effect of the irradiation, *i.e.*, the amount of reaction, can be closely watched and dangerous reactions are avoided. With general light baths one has little control, and dangerous reactions are not uncommon, especially if the lesions are of the exudative type. Clinically the most gratifying feature of the treatment is the rapid relief of pain which follows local irradiation. J. A. KEEN.

Diathermy Coagulation of the Tonsils. J. LEMOINE. (*Annales des Maladies de l'Oreille, etc.*, April 1928.)

The author uses diathermy in cases of blood diseases, such as hæmophilia, leukæmia, and chronic purpura; in hepatic and renal cases; in patients over the age of forty, suspected of arterio-sclerosis; in those who have fibrous tonsils, caused by repeated quinsies or by frequent acute inflammations; and finally in those who refuse surgical intervention either for some psychological reason, or because they cannot afford the requisite period of inactive convalescence.

There are four principal methods of destroying tonsillar tissue, which may be combined as desired.

(1) The monopolar electrode.
(2) The bipolar electrode.
(3) The diathermic "morceleur"—piece-meal coagulation.
(4) The bipolar diathermic snare.

The first two methods must be used with caution as they produce coagulation which is not easy to limit; the "morceleur" and snare are safer as the coagulation can be restricted precisely.

The special indications and technique of the different methods are fully explained and illustrated by diagrams. Local analgesia is always used.

The author claims that his methods cause the minimum of pain both during and after operation, that there is little disturbance of the patient's normal mode of life, that the healing is rapid, and that the resulting cicatrix of the fossa is supple.

He concludes with a description of diathermic methods of destroying tonsillar crypts, and fibrous cicatrices caused by the cold snare.

L. GRAHAM BROWN.

Abstracts

A Vocal Complication of Tonsillectomy and its Treatment. Sir JAMES DUNDAS-GRANT. (*Brit. Med. Journ.*, 5th January, 1929.)

After tonsillectomy the action of the soft palate is occasionally hampered by the tightening of its lower margin due to excessive cicatricial contraction. Care in enucleation will prevent this. In a singer it may interfere very seriously with the use of the voice, as the breath is apt to escape behind the soft palate and the tone becomes less clear. In addition the enunciation of the explosive consonants may become difficult and they may be replaced by the resonants—the so-called dyslalia aperta. Apart from care in operating, appropriate vocal and other exercises should be started as soon as the throat has recovered from the reaction following operation, *i.e.* in seven to ten days. A series of four of these exercises is described in detail and a case is quoted to show the excellent results which may be obtained from their employment.

R. R. SIMPSON.

How should a Tonsil Abscess be Opened? K. von DEICHSEL. (*Münch. Med. Wochenschrift*, Nr. 34, Jahr. 75.)

The environment of the patient with a tonsil abscess, whom the general practitioner is usually called upon to relieve, is often such as to render difficult or impossible the theoretically correct or text-book method of procedure. Under such circumstances Von Deichsel recommends that the abscess be exactly located by palpation with the protected left fore-finger and that then, under guidance of the latter, it can be opened with assurance and safety by means of a blunt probe the upper half centimetre of which has been slightly bent.

J. B. HORGAN.

The Habit of Hawking and Pharyngeal Catarrh. M. NADOLECZNY. (*Münch. Med. Wochenschrift*, Nr. 47, Jr. 75.)

The writer pays a well-deserved tribute to the work of the late Professor Johann Fein of Vienna bearing on the multitudinous diagnostic errors which are cloaked under the loose title of pharyngeal catarrh.

Apart, however, from the many affections of those parts of the respiratory and alimentary tracts lying contiguous with the pharynx, the subjective symptoms of which are referred to this region, there is a class of case, only too well known to the laryngologist, in which the pharyngeal catarrh, though mainly psychic in origin, is nevertheless associated with genuine pharyngeal paræsthesia and hyper-secretion. These later cases are mainly found amongst those who have to use

their voices professionally, though it is also found amongst girls and women who have no special occupation. The act of hawking pharyngeal secretion may be performed in four different ways which the writer describes in detail. The mental anxiety of the individual, combined with the frequent efforts to clear the throat, lead eventually to the formation of actual foci of pharyngeal or laryngeal inflammation or paræsthesia as well as to hyper-activity of the mucous glands in the regions involved, and thus is ultimately established a *circulus vitiosus* which protracts and intensifies the discomfort.

In the treatment of these cases, which is beset with many difficulties, scrupulous regard must be paid to the condition of the general health as well as to the local condition. The patient must be made to realise the evil of his ways and the necessity of overcoming the habit of hawking. Errors of voice production must be sought for and removed, whilst locally soothing insufflations must replace the more conventional brushing and caustic applications.

The article is of unusual interest to the laryngologist, and to be properly appreciated, should be read in full.

J. B. HORGAN.

Tonsillectomy in Hyperkinetic Diseases. Dr WICHURA. (*Münch. Med. Wochenschrift*, Nr. 18, Jr. 75.)

Wichura is amongst those who are of opinion that the failure to cure many forms of disease of the central nervous system is due to a failure to locate and remove the causative infective focus.

He describes many cases, from his own practice and many recorded by others, in which improvement or cure only set in after the radical removal of tonsils.

A consideration of the experience obtained leads to the following deductions:—

Diseased tonsils are of considerably greater causal importance in acute and chronic diseases of the central nervous system than has been assumed up to the present time. An infective suppurative focus must be looked for not only in the case of diseases of the central nervous system which are certainly or probably of a toxic nature, but also in those affections which are of a degenerative and abiotrophic nature. The septic focus must be sought for not only in the tonsils but also in the teeth, nasal sinuses, uro-genital system and abdominal cavity.

In cases of doubt the case should be referred for expert (laryngological) opinion.

Diseased tonsils should, as far as possible, be radically removed.

J. B. HORGAN.

Abstracts

MISCELLANEOUS.

Food Allergy as the Cause of Nasal Symptoms. CHAS. H. HYERMANN, M.D., St Louis. (*Journ. A.M.A.*, 4th August 1928, Vol. xci., No. 5, p. 313.)

This study is based on 33 cases of allergy in which nasal symptoms of vasomotor rhinitis were produced or influenced by the ingestion of certain foods. These foods included herring, chocolate bean, peas, turnips, hazel-nuts, garlic, eggs, etc. Fourteen of the cases were clinically hay fever. Some patients were sensitive to more than one allergic substance and required the exposure to others before severe symptoms developed, indicating that either simultaneous or sequential action of several allergens was necessary before symptoms occurred. The dosage seemed to control the appearance or severity of the symptoms. The total dose may result from a combination of inhaled and ingested materials, and may occur seasonally or non-seasonally. Nasal allergy was found to result from the ingestion of certain foods in patients who had a negative cutaneous reaction. These cases due to ingestion must be determined by experimental observations of diet and clinical study after the feeding with suspected allergens.

ANGUS A. CAMPBELL.

The Indispensibility of Cocaine in Rhinology, having regard to the Cocaine Habit. FRANZ BRUCK. (*Münch. Med. Wochenschrift*, Nr. 14, Jr. 75.)

None of the cocaine substitutes can exert the combined anæsthetic and vaso-constrictor effects of cocaine. They tend rather to cause hyperæmia which though it can be more than counter-acted by the addition of some adrenalin derivative is nevertheless a source of irritation to an inflammed nasal mucosa. Further, the preparation of a suitable mixture of the drugs is not always a simple matter.

The application of cocaine *lege artis* does not, in practice, conduce to the formation of the cocaine habit.

The well-known expression "Without Morphia I would not be a physician" might, for the rhinologist, be paraphrased as "Without cocaine I would not be a rhinologist." J. B. HORGAN

Bromstrontiuran in Laryngological Practice. MANFRED STERN. (*Münch. Med. Wochenschrift*, Nr. 44, Jr. 75.)

The writer deals with the therapeutic properties of a bromine-strontium preparation which is named bromstrontiuran, which is supplied by Drs R. and O. Weil of Frankfurt-am-Main. The bromine

component of the preparation acts on the central, whilst the strontium has an anæsthetic effect upon the peripheral nervous system.

Stern gives intravenous injections of this substance before tonsillectomy both to diminish the likelihood of hæmorrhage and to lessen the after-pain.

In cases of eczema of the external auditory meatus and of the introitus nasi a cure was obtained by giving three to six injections on alternate days. In cases of nasal acne and irritation the remedy was efficacious when all other remedies had failed. In cases of vasomotor rhinitis with resultant eczema of the upper lip the injections were followed by what Stern terms a symptomatic success (symtomatische Eefolg). J. B. HORGAN.

Experiences of Treatment by Means of Desentitisation during the Hay Fever Period in 1928. M. J. GUTMANN. (*Münch. Med. Wochenschrift*, Nr. 49, Jahr. 75.)

As a result of his painstaking investigations into the allergic reactions resulting from the various pollen intoxications the writer formulates the following requirements which must be fulfilled in every case if success is to be obtained:—

The special diagnosis as to the causative pollen (twenty-one are enumerated and named) must be as complete as possible.

The treatment must be started at the earliest possible moment.

The physician must possess adequate experience in order to judge the reactions following the injections.

Each individual patient must be desensitised with the specific pollen which is requisite for his case; mixed extracts are ineffectual.

In fifteen of the thirty-one cases treated by Gutmann last year it was possible to fulfil *all* the above requisites; of these nine remained free during the whole period, four were quite free until mid-June, and from that time only suffered minor inconvenience, whilst two were appreciably improved and only experienced the typical sneezing attacks for a couple of days at the end of June. J. B. HORGAN

On the Preparation of Pollen Extract for the Purpose of Treating by Desensitisation those who Suffer from Hypersensibility to Pollen. WM. GRÜNEWALD. (*Münch. Med. Wochenschrift*, Nr. 40, Jr. 75.)

The difficulties attending the treatment of those who suffer from hypersensibility to pollen are to be found in the fact that the essential parts of the pollen which form an effective antigen are not sufficiently

well known. Grünewald succeeded in effecting a remarkable cure in a pronounced and very typical case of pollen hypersensibility in which all the other conventional remedies had proved useless. He employed increasing subcutaneous doses of a mixed grass pollen extract, which was produced from the pollen after it had been stimulated to germinate by artificial means which he describes in detail. He assumes that he thus reproduced the actual conditions which prevail in the nose and the conjunctival sac of the hay-fever patient. Further clinical observation must decide whether better results are to be obtained from an antigen prepared in the manner described. J. B. HORGAN.

OBITUARY

DR MARCEL LERMOYEZ.

ONE of the most important figures in French Laryngology has disappeared in the person of the late Dr Marcel Lermoyez. He was not merely distinguished in the specialty to which he mainly devoted himself, but was a physician of considerable eminence in the hospitals of Paris. He had the distinction of acting as examiner in medicine for the University. Born in 1858 he had lived to the allotted span, and there is every probability that he would have survived to a still greater age had it not been for the irreparable shock he sustained by the death of his only son, a blow from which he seemed never to have recovered.

All the honours that were open to a laryngologist fell to his lot. He was President of the various French special societies, and Corresponding Member of many of those in other lands. In the year before the Great War he was made an Honorary Member of the German Laryngological Association. He was co-editor of the *Annales des Maladies de l'Oreille et du Larynx* in collaboration with Gouguenheim and afterwards with Sébileau, and took an active part in the editing of the *Presse Médicale*. He was a prolific writer and published his two attractive volumes on the treatment of diseases of the nose and also those of the ear. He was active in research, and his investigation into the bactericidal properties of the nasal mucus is almost a classic.

He gave the impression of a certain amount of reserve and hauteur, which was probably more on the surface than in his disposition. He undoubtedly helped to maintain the tone of his specialty and will long retain an honoured place in the memory of those who had the pleasure of knowing him personally or studying his works.

JAMES DUNDAS-GRANT.