Abstracts

Case for Diagnosis.—D. F. A. NEILSON.

Patient, male, aged 42. First complained of sore throat and dysphagia twelve months ago. Six months later noticed a lump on the right side of his neck. First seen three months ago.

On Examination.—Extensive ulcer on right faucial pillar and smaller ulcer of similar appearance on left anterior pillar; both ulcers hard to the touch with indurated margins. Wassermann reaction, negative. Skiagram of chest: nothing abnormal. No evidence of tuberculosis. Swab from throat showed staphylococci and streptococci.

Portions of growth from pharynx and from secondary swellings in cervical glands were reported as due to chronic inflammation, and without evidence of malignancy.

During the last six weeks the ulcers have altered very little in appearance. The larynx appears to be normal. Pain and dysphagia still persist. The patient has had several injections of novarsenobillon without noticeable improvement.

Mr. E. WATSON-WILLIAMS said that the section of the gland convinced him that this was a case of malignant lymphoma.

Mr. NEILSON, in reply, said that the condition showed improvement in comparison with its appearance when he first saw it in July. Still, he intended to treat it as a malignant case, and apply radium.

ABSTRACTS

EAR.

On the Occupational Deafness of the Weaver. Dr. SOLGER (Neustadt). (*Zeits. f. Laryngologie, u.s.w.*, 1931, Band xx., p. 361.)

Following the classification of Beek of Heidelberg, the author offers a contribution relegating the weaver to the fourth and final group of workers in noise. In contrast to the coppersmith and workers in very loud noise, the third group and the fourth group (to which the weaver belongs) manifest a gradually progressive increase in deafness.

In this class of workers amidst noise, it is obvious that the defect in hearing depends upon the intensity of the noise, as well as on the duration of the stimulus.

For this reason all standards failed in the past. Beek used a measure of sound after the system of Barkhausen. The essential constituents were a buzzing intercepter and a resistance from which the current could be led in an accurately measurable manner.

In this apparatus the various measurements differentiate about 100 per cent.

Beek reported that occupations producing a noise above 500

vibrations caused a definite demonstrable diminution in hearing for whispered words. Below this tone, long-continued noise caused a shortening of hearing by bone conduction without elimination of hearing for speech.

The limits between which noise causing damage to the inner ear is situated correspond to the noises produced by spinning and weaving.

The author investigated the hearing in 410 weavers. The upper tone limit was taken with the Galton whistle and was lowered in the majority of cases. Hearing by bone conduction was more shortened than hearing by air conduction.

Beek and Holtzmann observed that workers who had rested from work for more than a day, exhibited a considerable improvement in hearing capacity.

With regard to animal experimentation, which Beek and Holtzmann employed in relation to all noise occupation, it was found that animals possessed the same susceptibility to noise-injury as man. They found that during the experiments the animals had diminished appetite and became very emaciated, but recovered afterwards and put on weight.

The author attaches importance to the psychic disturbance in animal experiments, quoting Manassé's reference to the psychogenic factor in deafness produced by explosion, cold, fright, rapid movement and shock.

Along with his work the author recorded variations in the condition of the middle ear, but this has no bearing on the solution of the problem of occupational deafness.

Peyser (Berlin) and Beek assert that cotton-wool inserted into the meatus affords no protection against occupational deafness. The author informs all the weavers under his professional care that preserved Ohropax can be obtained from all chemists, and exhorts them to avail themselves of every opportunity of obtaining respite from the noise.

C. DE W. GIBB.

The Meninges and Cerebro-Spinal Fluid in Otology. A. GASTON. (*Les Annales d'Oto-Laryngologie*, October 1931.)

This excellent article is divided into five chapters. The first two deal with the physiology of the cerebro-spinal fluid, and the pathological anatomy of the otitic meningites, particularly with reference to the different paths of infection of the meninges. The succeeding chapters are concerned with the clinical aspect of the meningeal affections, their prognosis and their treatment.

From the pathogenic point of view the author emphasises the importance of the venous path in the contamination of the meninges by the infective organisms of oto-mastoiditis. This auricular venous system constitutes one of the most important areas of resorption of the

C.S. fluid. From this follow two physio-pathological results:—firstly, the possibility of a direct contamination of the C.S. fluid without true alterations of the meninges; secondly, the cerebro-spinal hypertension realised by an extensive obliteration of the venous system.

An attempt is made to explain the paradoxical and inconsistent results of sub-arachnoid punctures in the premeningitic stage. In the author's opinion the cause lies in the very special manner of circulation of the C.S. fluid, which uses an almost entirely intracerebral path, from the choroid plexus towards the sub-arachnoid spaces of the hemispheres, which are absolutely independent of one another. The descending path towards the spinal reservoir is insignificant. It is, therefore, logical to conclude that slight modifications in the cranial fluid would show only exceptionally in the spinal fluid.

From the clinical point of view the author proposes that the term "serous meningitis" should be discarded, for it is the same as "aseptic hypertensive meningeal reaction" (or "hypertensive state"). On the contrary, we must recognise hypertensive ventriculitis, "ventricular hydrops," the pathology of which is absolutely comparable with that of ventricular hydrocephalus.

The diffuse generalised meningites are all fatal. There are at present no therapeutic methods capable of checking the process of diffuse meningitis. On the contrary, those meningites of a generalised character which heal are only meningeal reactions without true alterations of the pia mater. A diffuse septic meningitis which evolves towards cure is only a meningeal reaction; the contamination is made without the intermediary of purulent meningitic patches. This "meningeal reaction" deserves to be recognised separately.

From the point of view of prognosis, the author states that several elements must be interpreted with great discrimination, viz.:—the ætiological facts, the clinical facts, the results found at operation and the cerebro-spinal fluid. Negative results of spinal puncture have no value. The examination of the C.S. fluid has a positive value only. Finally, the nature of the organism and its particular virulence have an appreciable prognostic importance.

As regards treatment, the author sets down the medico-surgical methods he advocates, which include treatment of the auricular focus, drainage of the arachnoid spaces and antibacterial therapy.

A very extensive bibliography is appended.

L. Graham Brown.

Contribution to the Study of Tuberculosis of the Ear. R. Mayoux. (*Les Annales d'Oto-Laryngologie*, August 1931.)

Tuberculosis of the ear, though so often unrecognised is, according to the author, common and perhaps the most common of all the surgical tuberculoses.

Ear

Three main anatomo-clinical forms may be recognised, depending upon whether the infection of the ear takes place *viâ* the Eustachian tube, the blood stream, or the lymphatics.

(1) The otitis of phthisis: infection by the tubal path.
(2) Primary mastoiditis: infection by the blood stream.
(3) Mixed otitis: (Koch's bacillus associated with pyogenic organisms:) infection by the lymphatics.

The first form is observed in adults suffering from pulmonary tuberculosis, the infection passing into the tympanum *viâ* the Eustachian tube, and affecting the mucosa. The symptoms are a painless discharge occurring without temperature or rhino-pharyngeal cause, whilst examination of the tympanum shows the characteristic multiple perforations and miliary tubercles. The evolution of this form is usually very slow but sometimes may become rapidly grave, giving rise to facial paralysis, Gradenigo's syndrome, labyrinthitis, and ulceration of the carotid. Surgical intervention is, in the torpid forms, nearly always useless, and in the necrosing forms dangerous.

In the second clinical type, a very rare form, the disease occurs in the mastoid bone. It is often associated with bony lesions elsewhere, and the tympanum is not affected until late. Surgical treatment usually gives excellent results.

In the third, or mixed form of otitis, the most frequently observed of all and, in infants particularly, the lesion is seen primarily in the tympanic mucosa and may extend later to the bone of that cavity and of the mastoid. Masked at first by the acute symptoms of the pyogenic infection it only later begins to reveal itself, when inoculation into the guinea-pig confirms the diagnosis. This form if treated correctly can be cured, but if neglected may lead to meningitis. The patient, therefore, should above all be considered as tuberculous, and treated by rest, heliotherapy and sojourn by mountain or sea.

L. GRAHAM BROWN.

Imperforate External Auditory Meatus, Primary Cholesteatoma, Spontaneous Radical Mastoidectomy, Ætiological Considerations. C. B. DE LA BERNEDIE. (*Les Annales d'Oto-Laryngologie*, September 1931.)

The writer has been unable to find an analagous case in the literature and hence reports this case as having a possible bearing on the theory of the primary nature of cholesteatoma.

His patient, a sailor aged 21 years, came under observation on account of symptoms due to the presence of a discharging fistula at the apex of the mastoid. The external auditory meatus was found to be imperforate at a depth of 3 to 4 mm., but the patient could hear the loud voice at a distance of $1\frac{1}{2}$ m.

Abstracts

At operation, a large cholesteatoma, the size of a pigeon's egg, occupied the greater part of the mastoid bone, the antrum and middle-ear cavity, but the bony external auditory meatus was entirely absent, owing to the non-development of the os tympanicum. The whole of the cholesteatomatous débris was enveloped in a pearly-white membrane, the ossicles were found lying outside the latter in the region of the tympanum, and the Eustachian tube was patent, but the canal of the external auditory meatus was replaced by a fibrous tract.

After operation the cavity healed quickly and completely and hearing was considerably improved, the loud voice being heard at 4 m.

Basing his arguments on conceptions of the embryology of the middle-ear and the facts ascertained during operation on the congenitally undeveloped ear of his patient, the writer seeks to prove that the cholesteatoma must have been of primary origin, and became infected only secondarily, when the mass had exteriorized itself through the mastoid cortex. (Apparently, little importance is attached to the possibility of a primary low-grade infection having taken place *viâ* the Eustachian tube. L. G. B.) L. GRAHAM BROWN.

Tuberculous Otitis Media of Childhood. W. KRAINZ. (*Wiener. Klin. Wochenschrift*, Nr. 47, Jahr. 44.)

The writer shares Cemach's view that in every case middle-ear tuberculosis must be looked upon as a secondary process. The primary focus lies in the deep cervical or peri-bronchial glands and originates from blood-borne infection.

Reference is made to the disparity which exists in the percentage figures of various observers regarding the incidence of specific infection in cases of suppurative otitis media in childhood. Most cases occur in those periods (from 2-3 and from 7-8 years) in which primary tuberculous infection is most frequent, and also at the ages when the acute infectious diseases of childhood (especially measles) are most prevalent.

The multiplicity of anatomo-pathological conditions shows that middle-ear tuberculosis is rather the local manifestation of a general disease than a disease *sui generis*.

Clinically it is possible to distinguish an acute, a sub-acute and a chronic form of the disease.

The differential diagnosis is rendered difficult owing to the simulation of many of the symptoms by those of ordinary pyogenic infection. At most a third of the cases show a characteristic otoscopic picture. Multiple perforations of the tympanic membrane are only of symptomatic importance when they occur without pain or reaction, under the eyes of the surgeon. Granulations are of diagnostic value only when

they occur in the acute stage of the otitis. Facial paralysis only justifies suspicion. Sometimes it is possible to confirm a remarkably good perception for the lower tones in comparison with speech perception. The general condition of the child and a positive Pirquet reaction are helpful. Specific infection can only be definitely excluded by a negative Cutin-reaction. The finding of extensive caseation at operation is a sure sign, but in its absence the specific nature of the infection may only be suggested by the abortive efforts at post-operative repair. Histological examination of the diseased tissues gives a positive result in only 30 per cent. of cases.

The course of ear tuberculosis is entirely dependent upon the state of immunity of the whole organism. Any success resulting from local treatment depends upon the result of general treatment, and the treatment of the cases should therefore devolve mainly upon the specialist in tuberculous diseases.

Operation has gradually been relegated to the background. The decision to operate should be arrived at only in conjunction with the specialist on tuberculosis after a careful survey of the local, and more particularly of the general, condition of the individual. It follows that the prognosis of the local lesion depends upon the general prognosis.

The circumstance that in childhood the first clinical manifestation of tuberculosis is often in the middle ear makes the early diagnosis of the condition more than usually important. J. B. HORGAN.

Ménière's Disease. W. S. THACKER NEVILLE. (*Brit. Med. Journ.*, 11th July 1931.)

The various theories of the causes—intracranial and intra-aural—of this disease are reviewed in some detail and the author concludes by supporting the "faulty water metabolism" theory of Dida Didering and Mygind.

The treatment based on this theory consists in diminishing the intake of fluid so that the patient loses weight and is actually thirsty. For dietetic purposes fruit and vegetables are considered to be fluid. The loss of water must be promoted by carbonic acid, fir needle and mud baths and by the Scotch douche, by exposure to the carbon arc up to one hour three times a week, and by massage. Diet must be salt-free. Local treatment consists in catheterisation of the Eustachian tube. The drug treatment is, in the opinion of this Danish school, unimportant. The acute attack is treated with atropine, but ergotinine is also useful. An injection of salyrgan is followed up by a long course of calcium-diuretin; while ovarian and thyroid extracts and calcium are also used.

The author has had success with a salt-free diet and decreased intake of fluid. He has also used in a few cases bulbocapnin (Merck)

and he states that this drug is as valuable in Ménière's disease as ephedrine is in asthma. Patients take one tablet (0·1 gm. oral tablet) a day and this is sufficient to prevent vertigo, while the acute attack is treated by a hypodermic injection (0·1 gram hypodermic tablet) which will relieve the patient almost at once. R. R. SIMPSON.

Hearing and Labyrinth Pressure. H. LORENZ. (*Acta Oto-Laryngologica*, Vol. xvii., Fasc. 1.)

Increased pressure in the labyrinth may cause diminution of hearing either by preventing a supposed molecular movement of the labyrinth fluid, or by limiting the excursions of the fenestrae. By means of specially constructed fluid-containing vessels the author was able to prove that the second of these alternative explanations is the correct one. He showed further that the degree of excursion of the fenestral membranes was probably diminished both by increased concentration of the fluid and by increased pressure. Probably both these factors are of importance in pathological states, but it is not possible to be sure which of them plays the chief rôle. THOMAS GUTHRIE.

Experimental Osteodystrophia Fibrosa in the Dog. M. WEBER. (*Acta Oto-Laryngologica*, Vol. xvii., Fasc. 1.)

A series of young dogs fed on a diet poor in calcium and free from Vitamin D, showed in the capsule of the labyrinth the characteristic features of Christellers' *osteodystrophia fibrosa*, consisting of generalised absorption of the compact bone and its replacement by fibrous tissue and new-formed spongy bone.

A detailed description, together with excellent photo-micrographs, is given of the microscopical appearances found in the labyrinth of each of the six dogs examined.

The results of these experiments tend to confirm the already published work of Becks and Weber on the experimental production of otosclerosis. THOMAS GUTHRIE.

The Treatment of the Ménière Syndrome by the Zünd-Burguet Electrophonoïd Vibromassage. J. A. KEEN. (*Lancet*, 1932, Vol. ii., p. 285.)

The author discusses the use of the Zünd-Burguet method in the treatment of aural vertigo, and has (as have certain other observers) found it very valuable. He suggests that no serious labyrinthine operation should be advised unless the Electrophonoïd has been given a thorough trial. MACLEOD YEARSLEY.

Ear

Clinical Note on Traumatic Rupture of the Tympanic Membrane. Dr. JAROMIR JAVUREK. (*Otolaryngologia Slavica*, 1931, Vol. iii., Fasc. 4.)

A case of incomplete rupture of the tympanic membrane is described. The patient, aged 32, was suffering from a cold for some days, and, after sneezing, felt a violent pain in the left ear with reduction of hearing. He was seen by the author on the following day, who gives the following description of the appearance:—"The left tympanic membrane was intensively hyperæmic along the stria malleolaris. Also, radial injection of the tympanic vessels was seen. The processus brevis, the two proximal thirds of the manubrium and the whole lower half of the membrane were covered with a spherical structure with a large base, resting upon the membrane. This structure was surrounded by a red band. Towards the top of it the colour changes from red to yellow, being white-yellow on the very top. The tumour was "the size of a little pea."

The bulla was pierced and found to be full of air. It collapsed, resulting in a circular crimson area in the membrane; the patient was relieved at once and the tympanic membrane recovered to normal in the course of a few days.

There was nothing in the history or in the appearance of the other ear which would suggest any previous abnormality of the membrane.

The author explains this case as a rupture of the inner and middle coats of the tympanic membrane with a valvular opening, the outer coat remaining intact.

The case is illustrated in colour and a comprehensive bibliography is given. E. J. GILROY GLASS.

Septic Thrombosis of the Lateral Sinus in Children. DOUGLAS GUTHRIE and R. STEWART MIDDLETON. (*Brit. Med. Journ.*, 25th July 1931.)

The detailed history of a case of septic thrombosis of the lateral sinus, which presented unusual features, and the brief notes of four other cases are presented. The authors comment on certain features of the unusual case.

Diagnosis.—The liability to error in diagnosis increases during an influenza epidemic, as the general symptoms may exactly correspond to those of a certain type of influenza. It cannot be too strongly insisted upon that routine examination of the tympanic membranes should be made in all sick children. "The otoscope is as essential as the stethoscope in pædiatric practice." The characteristic rigors are not always present in children, although the "alpine peak" temperature chart is a constant phenomenon.

Extension of the Thrombo-phlebitis. — As a rule extension of infection affects the upper end of the sinus rather than the lower

end of the jugular vein. With a view to minimising the risk of an upward extension of the thrombo-phlebitis, which may demand a second operation, the authors suggest the following modification in technique. Instead of following the thrombosed vessel upwards until healthy tissue is reached and then introducing packing through an infected tract, the reverse procedure should be adopted. Thus, before opening the sinus it should be traced backwards until an area of healthy dural wall is exposed. A small incision is made here and packing is introduced so as to check the hæmorrhage and to occlude the sinus, and then the infected vessel is slit open and treated in the usual manner.

Œdema of Face and Scalp.—Massive œdema of the face and eyelids on the side opposite the lesion, eventually spreading over the scalp, appeared in an unusual case on the day following the re-ligation of the jugular vein. This persisted for ten days and then gradually disappeared. The authors do not explain this phenomenon, and they cannot find any similar case recorded in the literature of sinus thrombosis.

Metastatic Infection of the Hip Joint.—The hip is the joint most frequently involved when metastatic arthritis follows thrombosis of the lateral sinus. It is liable to be of the "quiet" variety met with in cases of multiple osteomyelitis, hence the necessity for regular examination of the joints in all cases of thrombo-phlebitis.

Effect of Blood Transfusion.—Blood transfusion, whether of citrated blood, whole blood, or of so-called "immune" blood, is of doubtful value in the treatment of acute septicæmic or pyæmic conditions. If, however, the patient survives for a period of some weeks, a progressive secondary anæmia develops, and at this stage transfusion appears to raise the patient's power of overcoming the infection. Repeated transfusions of small quantities of blood are of more benefit than a large quantity on one occasion. R. R. SIMPSON.

NOSE AND ACCESSORY SINUSES.

Post-Operative Complications of the Radical External Operation on the Frontal Sinus. HAROLD I. LILLIE. (*Archives of Oto-Laryngology*, December 1931, Vol. xiv., No. 6.)

This study was undertaken in order to ascertain whether the complications were due to faulty technique or to the nature of the disease. The investigation deals with a series of 158 consecutive cases in which a radical operation was performed on the frontal sinus. In 45 cases some post-operative complication was found. There were three deaths, two from meningitis and one from brain abscess. General anæsthesia was employed in all but four cases.

Gentleness in handling the tissues, and avoidance of traction are of importance. Diplopia is the most common complication following the radical external operation, and this usually disappears within ten days. A varying amount of swelling of the upper lid may be expected in all cases, and in five of the present series there was orbital cellulitis. In one case an abscess developed. Hæmatoma of the lid occurred in two cases, and in twelve cases there was troublesome chemosis of the conjunctiva. Localised osteomyelitis was observed in five cases, but in no case did it become extensive.

Tonsillitis may occur, and in one case in which convalescence from the frontal sinus operation had been uneventful for several days, meningitis developed after tonsillitis. Infected tonsils should be removed before operation on the frontal sinus, if the latter is not too urgently demanded.

In four cases erysipelas followed the operation, and the treatment which was found most satisfactory was the application of moist packs soaked in solution of aluminium acetate.

As regards the two cases of meningitis, in one case this followed tonsillitis; the other had an unrecognised fracture of the inner table which caused a rent in the dura. Had this been recognised at the operation wide exposure of the defect might have prevented the meningitis, as it does in the mastoid region.

A frontal lobe abscess developed in one case, the only symptom being that of a peculiar feeling, not actual pain or headache. Examination revealed necrosis of the inner table.

The writer concludes that the fear of complications need not deter one from operating when operation is indicated, as good results far out-number failures. Skilful technique, however, and thorough removal of diseased tissue is always indicated.

DOUGLAS GUTHRIE.

On Tooth-damage after Radical Operation on the Antrum and a Proposal for its Prevention. K. E. NAGEL (Heidelberg). (*Zeitschrift fur Hals-, Nasen- und Ohrenheilkunde*, Vol. xxx., Part 2, p. 265.)

The systematic study of this result is mainly credited to Amersbach, but Nagel considers that he has overstated the degree of inconvenience suffered by the patient, and also its permanence. Later observers found that insensibility of the tooth to the faradic current did not necessarily imply an aseptic necrosis of the pulp. Nagel, in fact, found that in the anæsthetic teeth a necrosis of the pulp could be excluded clinically. That a pulp is dead can only be revealed by boring or by microscopic examination. The rarity with which the two incisors and canines are affected is accounted for by the anastomosis of the anterior superior alveolar nerve with the one of the opposite

side. In order to avoid damage to the dental plexus the incision should be made as high as possible and a margin of bone should be left above the roots of the teeth. The mucous membrane should be disturbed as little as possible. On the whole the injury to the teeth is of too little seriousness for it to contra-indicate the carrying out of the Denker operation. JAMES DUNDAS-GRANT.

Carcinomatous Pyo-pneumatocele of the Frontal and Ethmoid Sinuses. H. BURGER. (*Acta Oto-Laryngologica*, Vol. xvii., Fasc. 1).

The patient was a man, 74 years of age, who had suffered for four months from a painful swelling of the frontal region with complete closure of the left, and partial closure of the right eye. The eyes themselves were not diseased and showed only slight restriction of movement. The nasal cavities were normal in appearance. The patient was not ill, and complained little of headache.

The appearance at first sight suggested a diagnosis of tertiary syphilis. The Wassermann reaction, however, was negative and a radiogram showed very large and thin-walled frontal sinuses suggestive of mucocele. This, together with the inflammatory appearances, led to a diagnosis of pyo-pneumatocele.

At the operation both the frontal sinuses and a large part of the ethmoid were found to form one large cavity, the bony walls of which were greatly thinned and entirely absent over large areas. The cavity contained air and masses of new growth which had invaded the left frontal lobe of the brain, in which there was also a large abscess. Microscopic examination of the growth showed squamous-celled carcinoma with much cornification and many cell-nests. The patient died about two months later. As the new growth did not fill the cavity, but clothed its walls, the expansion and resorption of the bone could not have been due to pressure by the growth. The Author adheres, therefore, to his diagnosis of pyo-pneumatocele and considers that the growth had secondarily invaded the cavity.

He has been unable to find any record of a similar case.

THOMAS GUTHRIE.

LARYNX.

Röntgen Treatment of Laryngeal Tuberculosis. Z. SPECTOROWA, J. SOBIN and L. MELNIKOWA (Moscow). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Vol. xxx., Part 2, p. 289.)

In experiments on the treatment of experimentally produced tuberculosis in the larynx of the rabbit, it was found by Albrecht and Brünings that X-rays gave better results than solar or ultra-violet rays. Good results were obtained in the human subject in suitable cases. The most favourable were those of the proliferative fibrous form; the least favourable were those of the exudative kind which

were made worse. Fresh granulation tissue becomes fibrous under the influence of the rays, but in cases in which the organism has lost its faculty for forming fibrous tissue, as in the caseous exudative class, the diseased tissue breaks down and the lesion flares up. The usual indications were normal or sub-febrile temperature, no great acceleration of blood-sedimentation, latent or chronically progressing lung condition. In all cases, before starting the Röntgen treatment, a radiation of the laryngeal region with the quartz-light was carried out in order to test the tolerance of the patient to the ultra-violet rays. The Röntgen treatment was applied only if there was no acute laryngeal or general reaction to these.

The technique was as follows:—Neo-intensive apparatus, 160 KV, 4 ma, 0.5 mm., zinc with 1 mm. aluminium, FD 30 cm., radiation-field, 1. Lead-localiser 6 cm. in diameter. The larynx was irradiated with $\frac{1}{6}$ H.E.D. on each side. This series was repeated in from seven to ten days. If improvement followed the treatment was renewed after a much longer interval. The treatment is applicable to the slight initial cases, but also in cases in which the whole of the pathological tissue cannot be removed by surgical means.

JAMES DUNDAS-GRANT.

The Tonsil of the Sinus Pyriformis. A Contribution to the Ætiology of Acute Œdema of the Larynx. CAMILLO WIETHE (Vienna). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Vol. xxx., Part 2, p. 235.)

In view of the occasional occurrence of œdema of an aryepiglottic fold and the surrounding tissues, for which no obvious cause is apparent, the writer stresses the importance of the recognition of a small tonsillar structure in the upper and anterior part of the pyriform sinus near the point of approximation of the thyroid and cricoid cartilages. It shows itself as a small granule varying in size between a pin-head and a grain of rice, but it may extend below the mucous membrane and there attain the size of a small bean. Histologically it consists of definite tonsillar tissue with follicles, germinal centres and crypts. When inflamed it is surrounded by an area of œdema. There may be great pain, but it subsides before long, leaving a sensation of a large foreign body in the throat. It is difficult to explore the source of the inflammation on account of the œdema.

JAMES DUNDAS-GRANT.

The Influence of Tracheo-bronchoscopy on Blood-pressure and Respiration. T. J. ABRAMOW (Saratow). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Vol. xxx., Part 2, p. 197.)

The disturbing effects of bronchoscopy, at all events in average hands, on blood pressure and respiration are shown by a number of

tracings of experiments on dogs. The mechanical irritation is the exciting cause. The afferent stimulus is conveyed through the superior laryngeal nerves and the efferent through the pulmonary branches of the vagi. When these nerves are severed the disturbances do not take place. Similarly the reflex actions on the lungs and heart are eliminated by cocainising (5 per cent.) the mucous membrane of the air passages, a procedure which is strongly recommended. The shortening of the duration of the bronchoscopy does not exclude significant disturbances of blood-pressure and respiration.

JAMES DUNDAS-GRANT.

PHARYNX.

Has Tonsillectomy Injurious Results? E. WIRTH and O. LACHENIT. (*Münch. Med. Wochenschrift*, Nr. 45, Jahr. 78.)

Personal reports were obtained from 92 patients upon whom tonsillectomy was performed. Of these, 28 had complaints to make, viz.: 10 of an inclination to head colds, hoarseness and bronchial catarrh, 6 of a feeling of dryness in the throat, 9 of pharyngeal catarrh and a continuance of anginal troubles and 3 of trouble in speaking or singing.

A careful examination by the authors did not allow of a definite conclusion that the tonsillectomy was responsible for injurious results in any of these cases. In almost every case it was possible to find a more tangible explanation of the complaint. As a rule it was due to some condition which had existed prior to operation. Seventy per cent. of the patients interrogated made no complaint whatever. The commonest cause of the continued complaint was found to be due to some abnormality in the nose or naso-pharynx. Speech defects were due to scarring of the faucial pillars or soft palate. Almost all the patients operated on, when asked if they would again undergo the operation if this were necessary, replied with a decided "Yes."

J. B. HORGAN.

Observations following Adenoidectomy. FREDERICK T. HILL. (*Archives of Oto-Laryngology*, December 1931, Vol. xiv., No. 6.)

Although the operation of adenoidectomy is quite simple, it is more difficult to achieve a good clean result than in the removal of tonsils. "Anyone who reflects on the lack of attention that is placed on the adenoid part of the average tonsils and adenoid operation must feel that here is indeed cause for failure. There is a tendency to hurry through this part of the combined operation, while the handicap of the bleeding, the use of dull cutting instruments, and the

difficulty of working without direct visual control are factors which continually militate against success."

In a previous paper, the writer, on examining 914 children who had had tonsil and adenoid operations, found that in 23 per cent. the results were obviously poor. Lymphoid tissue had been left behind more frequently in the nasopharynx than in the tonsillar fossae. The favourite site for "tags" seems to be the roof of the nasopharynx, but remnants may be found around the eustachian orifices, and lymphoid tissue in the fossae of Rosenmüller is extremely common.

Irregularities in the contour of the nasopharynx make a complete removal of the adenoid no easy matter in certain cases.

Since the writer began to observe post-operative results systematically, he has been strongly impressed by the fact that the operation is very frequently inefficient. His paper voices a plea that the careful attention to detail which is now devoted to removal of tonsils might also be accorded to removal of the adenoid growth.

DOUGLAS GUTHRIE.

The Pathological Anatomical Conditions for the Development of Traumatic Angina. RICHARD WALDAPFEL (Vienna). (*Zeitschrift für Hals,- Nasen- und Ohrenheilkunde*, Vol. xxx., Part 2, p. 245.)

While the normal nose contains very few bacteria, the number increases greatly if tamponning is carried out. It was found that hæmolytic streptococci in pure culture were found only in those cases in which after tampon or galvano-cautery a traumatic angina developed. Whereas bacteria are never found in the parenchyma of normal tonsils, streptococci are found in them after nasal tamponning, even when the tonsils appear to be normal. This is taken to show that there is some close union between the nose and the tonsils in spite of the negative result of experimental investigations up to the present.

JAMES DUNDAS-GRANT.

I. *Papilloma of the Palate.* II. *Mucous Membrane Pavement-Epithelial Carcinoma of the Tonsil.* III. *Papillary Adeno-cystoma of the Vestibule of the Nose.* HANS REUYS (Leipzig). (*Zeitschrift für Hals,- Nasen- und Ohrenheilkunde*, Vol. xxx., Part 2, p. 160.)

I. The "papilloma" was of the size of a "three mark piece," pedunculated and of the colour of the surrounding mucous membrane, on the soft palate of a girl 4 years of age. It had developed within a few months and had given rise to no inconvenience. Removal with a snare (apparently galvano-caustic) was easy, but recurrence took place within four weeks' time. Microscopically the growth consisted mainly of stroma with blood-vessels surrounded with connective tissue branching into the papillae. There was also much wide-meshed

œdematous tissue containing a few cells. These cells under a high power were found to be spindle-shaped with oval or roundish nuclei. There was little or no connective tissue, and many nuclei showed mitoses. There was no tendency to the formation of mature connective tissue, and the appearance resembled that of a blastomatous growth. The latest report was that in spite of daily applications of nitric acid for about a month the papilloma had only slightly diminished in size. In January last it was again "cauterised" and since then the child had been seen three times on account of small recurrences at intervals of several months.

II. The growth, of the size of a plum, grew from the region of the left tonsil in a woman aged 56. The surface was smooth and it hung down into the hypopharynx, covering in part the entrance to the larynx. There was no indication of infiltration or of involvement of glands. It came away along with the tonsil when this was enucleated. When cut it was found to be solid and in some places granular. Microscopically it was obviously a "mucous membrane pavement-epithelium carcinoma." Two months later an enlargement of glands in front of the sterno-mastoid appeared but they yielded to irradiation. At present the tonsillectomy area has cicatrised quite smoothly and there is no discomfort.

III. In a woman, aged 47, a swelling under the skin of the right ala nasi had developed in the course of two years. It was about the size of a walnut, tender and elastic on pressure. It appeared like a vestibular cyst but extended rather higher. The tumour was removed by external operation, and on microscopical examination was found to be formed mainly of small cysts containing papillary elevations and was, therefore, a "papillary cystadenoma." In many cases the outcome is less favourable than in this one and there is a tendency to progressive infiltration reaching even to the brain. JAMES DUNDAS-GRANT.

Tumours of the Jaw, with special regard to Early Diagnosis. HANS PILCHER. (*Wiener Klin. Wochenschrift*, Nr. 42, Jahr. 44.)

The article deals with tumours of both the maxilla and the mandible, mainly of the latter.

Malignant tumours should be radically removed at the earliest moment by jaw resection by knife, chisel, saw or diathermic cauterisation. If the nature of the tumour be in doubt, it is not permissible to remove a portion for microscopic examination unless it be possible to have an immediate report on a frozen section and to carry out at once the necessary conservative or radical operation which circumstances may dictate. Owing to the possibility of radical operation being required, the immediate prothesis should also be fashioned

beforehand. In this way it is possible to exclude the risk of causing secondary (oral) infection of the tumour itself or of the dissemination of cancer cells.

The histological diagnosis, especially of mandibular tumours, is extensively reviewed. Whilst radiograms show a diminution of the bone shadow they do not permit one definitely to state its cause, or whether solid tissue, if present, is of an inflammatory or of a neoplastic nature. Certain conclusions can be drawn from the form and limitation of the shadow if precautions are taken. Carcinoma of the jaw generally starts from the superficial mucous membrane; sometimes from the skin, which favours early recognition. Carcinoma of the antrum, on the other hand, involves the lining membrane and may closely simulate an empyema of that cavity until the latter becomes full of the growth. Two important clinical symptoms are referred to, pain and looseness of a tooth. The former should always excite the suspicion of malignancy. A loose tooth resulting from pyorrhœa alveolaris can only be rotated about one axis, whilst one that results from a neoplastic infiltration of the alveolus may also be moved to some slight extent, in a direction parallel to itself. J. B. HORGAN.

Sepsis following Angina. O. VOSS. (*Arch. Ohr., u.s.w., Heilk.*, 1931, Band cxxx., pp. 83-142.)

In a lengthy article Professor Voss discusses the extremely complicated and controversial subject of generalised sepsis following throat infections. There are several ways of explaining how the local infection becomes generalised:—

(*a*) By the *blood-stream* (Reye, Fränkel); a thrombosis of a small vein occurs in the immediate neighbourhood of the inflamed tonsil. By way of the ascending pharyngeal and other larger veins the thrombosis eventually reaches the internal jugular vein. Thrombosis of the internal jugular can also be caused more directly by the breaking-down of suppurating lymphatic glands lying in close contact with the vessel wall. However, the latter condition more often results in a direct penetration of the blood-stream by the organisms without thrombosis (Waldapfel), thus illustrating the spread.

(*b*) By the *lymphatic system* (Uffenorde). The lymphatic spread is limited to the early stages of the infection; later on the condition becomes a blood-stream infection.

(*c*) By the *fibrous tissue planes.* The primary change is a phlegmonous inflammation of the various anatomical tissue planes and the spread is first by contiguity (Claus). As a secondary change thin-walled veins become affected and thrombosis results.

In the author's experience there is no very clear dividing-line

between these various types of spread. Histological changes demonstrating all three types are found in fatal cases in which the tissues in the tonsil region and upper part of the neck have been sectioned (see illustrations in article).

Professor Voss describes twenty-four of his own cases in great detail. He then analyses the symptoms, signs, bacteriological findings, methods of treatment, prognosis and other points, as shown by his patients, and by other series of cases collected from an extensive survey of the literature. Abscesses either in or around the tonsil, or in the neck were found in 66 per cent. of Voss's cases. An important clinical sign for differential diagnosis is movement of the soft palate on phonation. With simple œdema the soft palate still moves, but when a peritonsillar abscess is present the soft palate is quite fixed.

Operations on thrombosed veins, either ligature or resection, were performed in 17 out of the 24 cases. In two cases the common facial vein, in two others the anterior jugular, and in twelve cases the internal jugular vein were thrombosed. In one case the mastoid process had to be opened and the jugular bulb, lateral sinus and sinus transversus resected, as the thrombosis had spread upwards against the blood-stream.

As regards *tonsillectomy* in these serious cases, Voss is inclined to be conservative. The tonsil was enucleated only in cases in which the local changes were marked and indicated a collection of pus. The author then advises that only the tonsil on the affected side should be removed. The end-results in the 24 cases were:—17 recovered and 7 died. J. A. KEEN.

BRONCHOSCOPY.

The Bronchoscope in the Diagnosis of Pulmonary Disease. Drs. SCOTT, PINCHIN and MORLOCK. (*Lancet*, 1932, Vol. i., p. 224.)

The authors are of opinion that bronchoscopic examination is a very valuable method in the investigation of pulmonary disease. In certain groups, such as new growth and suppuration, it is essential. Moreover, it is safe in experienced hands and does not unduly disturb the patient. They have never seen any ill-effects in some 450 bronchoscopies, more than one-third of which were done on out-patients, nor did any patient complain of the examination, indeed some who attended regularly for treatment of suppurative conditions, raised the authors' suspicion that the cocain spray was the attraction, but the substitution of percain for cocain failed to diminish their desire for treatment. MACLEOD YEARSLEY.

Miscellaneous

MISCELLANEOUS

The Surgical Approach and the treatment of Tumours and other lesions about the Optic Chiasma. GEORGE J. HEUER. (*Surgery, Gynæcology and Obstetrics*, October 1931, Vol. liii., No. 4.)

The region about the optic chiasma is the start of a large number of tumours and other lesions which may result in optic atrophy and visual disturbances, and in the diagnosis of which close co-operation is necessary between the physician, ophthalmologist, neurologist, rhinologist, endocrinologist, röntgenologist and surgeon.

Coincident with the increase in the technique of the method of approach to this region, an increasing degree of knowlege is being acquired regarding the pathology and treatment of these lesions, some of which were unknown twenty years ago.

A comprehensive review of the development of the various methods of exposure of this region is given. The operations for this purpose may be divided into two large groups, the intracranial and the extracranial. The first group includes the temporal, transfrontal and lateral frontal routes, while the second includes the nasal and the buccal trans-sphenoidal routes. The intracranial route has now become the method of choice and has largely supplanted the trans-sphenoidal route, even for tumours and cysts arising in the sella turcica itself.

An extensive review of the pathology, symptoms and signs of these tumours is given. The treatment in many cases still remains problematical: progress in this would be facilitated if, in reports on these cases, particular reference were made to the pathology of the lesion treated. In the treatment of the hypophyseal adenomata X-ray has been a distinct contribution. In certain cases it may check the growth so as to render operation unnecessary, and its routine use in post-operative treatment of these tumours is advocated.

The article comprises 57 columns with 39 illustrations, and an extensive bibliography is given, the references including both American and Continental authors. S. BERNSTEIN.

Diphtheritic Cases of the Munich University Children's Clinic (1915-1930) *and their Treatment.* H. SCHABER. (*Münch. Med. Wochenschrift*, Nr. 30, Jahr. 78.)

An analysis of the method of treatment and percentage mortality in 2000 cases. A table and a diagram accompany the article.

The conclusion reached is that the earliest possible administration of an adequate (up to 60-70 thousand but rarely more than 35 thousand units) dose of serum constitutes the best means of neutralising the

toxin before a lethal amount of the latter has become fixed to the body cells. This is of still more importance in the severe cases in which the quality or grade of the infection is higher, and in which a lethal amount of cellular fixation occurs earlier; only that toxin which is still in circulation is capable of being neutralised by serum. The fatal termination of any one case may be determined by a combination of factors, such as the grade of virulence of the infection, the resistance of the individual, the amount of serum administered and the time of its administration. By a consideration of these factors, it is possible to explain the failure of serum to prevent a fatality in individual cases even when injected on the second or third day of the disease.

The writer noted no appreciable difference in the results obtained when the cases were treated with a symbioserum of diphtheria-streptococcal anti-toxin. He also found that the diphtheria-convalescent serum did not fulfil the hope that had been raised.

J. B. HORGAN.

On the Problem of the Pathomorphosis of Diphtheria. Dr. DE RUDDER. (*Münch. Med. Wochenschrift*, Nr. 30, Jahr. 78.)

The writer refers to periodic waves not only of the increased incidence but also of the increased virulence of diphtheria. The causation of such a wave as that which has affected not only Germany but the whole world since 1927 cannot be due to waves of condensation of relatively susceptible individuals such as, it is well recognised, occur in some localities in the case of measles, but must rather be due either to an increased susceptibility of human beings or to some alteration in the infective power of the micro-organism. The possibility that these waves are due to special climatic periods is examined but discounted. Experience in Munich and Berlin has conclusively proved the narrow group-formation of hyper-toxic forms of diphtheria, without any proof being established that the cause of such localised increased virulence is to be found in the exciting organism. Ramon and Langer have, however, definitely established that the toxin derived by cultivation and animal experimentation from these malign forms possesses a comparatively stronger power of tissue-fixation and of avidity for the body cells. When injected intra- or subcutaneously in animals it is not possible to inhibit the toxic effect by injecting anti. toxic serum at the same site a few minutes later. From this it would appear that the abnormal waves of infection are brought about by irritable strains of bacilli, the toxins of which have abnormal cell-avidity.

When, however, we turn to the question why certain diphtheria bacilli suddenly acquire such characteristics, we have to confess that the science of epidemiology has so far failed to supply an answer.

Two diagrams accompany this article. J. B. HORGAN.

Miscellaneous

On Severe Diphtheritic Infection. J. HUSLER. (*Münch. Med. Wochenschrift*, Nr. 30, Jahr. 78.)

Husler shares the opinion of others that, of late, a malign form of diphtheritic infection is of fairly frequent and universal occurrence. In recent years it has been established in Munich that this malign form leads to a certain group-formation of severe cases, so that the infection spread by one of these cases is more prone to be severe. This has been noticeable in school classes, in kindergarten and even in whole town districts, the mortality rate in neighbouring districts showing wide percentage variations. The practical deduction to be made from these observations is, that it is not enough to notify the disease, but also its grade, so that early and efficient passive immunisation and isolation may be carried out in the district. It has likewise been established that the increased malignancy is not due to a constitutional factor but to increased toxæmia. The latter is the result either of the time occupied in the formation of the toxin, its increased power of absorption or, what is most probably correct, its increased power of being assimilated by the tissues.

As the tissues may have received a lethal dose in less than 24 hours the early and adequate administration of serum cannot be too strongly insisted on. In the series of cases under review the average time before a doctor was called varied from 2-3 days, whilst on the average serum was not injected by the latter until between the third and the eighth day. This may be explained partly by the fact that it is only in severe cases in which the tonsils, uvula and soft palate are much swollen that a proper inspection of the pharynx and larynx is difficult, and in consequence the presence or absence of pseudo-membrane is difficult to confirm. Further, the deposit may be of an atypical brown appearance, badly circumscribed, and camouflaged by mucus and masses of secretion. As aids to diagnosis the writer refers to the foul breath, the marked early regional adenitis, the doughy thickening of the neck and the characteristic behaviour of the temperature.

Husler is of opinion that cases which cannot be saved by a maximal dose of 30 to 40 thousand units are not capable of recovery. He lays greater stress on the manner of infection than on its amount, and believes that a combination of the intra-muscular and intra-venous methods is so desirable in severe forms of infection that, if otherwise not feasible, it constitutes a sufficient reason for rapidly transferring the patient to a suitable hospital.

An analysis of sixty severe cases (with table) is given.

J. B. HORGAN.

Abstracts

The Present and Future Outlook of Laryngo-Rhino-Otology. GUSTAV HOFER. (*Wiener. Klin. Wochenschrift*, Nr. 52, Jahr. 44.)

The author enumerates and reviews the problems which remain unsolved and the inconsistencies which still exist, and the list is long enough to chill the ardour of the most optimistic. Whilst little of a constructive nature is mentioned, due notice is taken of the progress of recent years, particularly in the diagnosis of labyrinthine diseases and intracranial complications of ear disease. The view is expressed that fractures of the cranial base form an important chapter in the surgery of the ear, a number of otologists, more especially Voss of Frankfort, having shown that these cases may successfully be dealt with by early exposure of the fracture, which so often involves the temporal bone, and so secondary infection of the meninges is obviated. The endoscopic extension of the laryngologist's activities into the air and food passages is remarked upon. The view is expressed that, whilst this evolution is a natural sequence, it is necessary to proceed slowly.

Hofer considers that a department of clinical phonatry for the cure of speech and voice defects should constitute an integral part of every rhino-laryngological clinic. These are either already in existence or in process of formation in every large throat and nose clinic in Germany. The critical observer must notice in this review a failure to appreciate the original work of oto-rhino-laryngologists of other than Teutonic origin. J. B. HORGAN.

Æthereal Oils as the Cause of Allergic Diseases of the Skin and Mucous Membrane. ERICH URBACH and CAMILLO WEITHE. (*Münch. Med. Wochenschrift*, Nr. 48, Jahr. 78.)

Experimental proof shows that æthereal oils are capable of causing allergic diseases of the skin and mucous membranes.

In two cases that were sensitised by sage it was confirmed by exhaustive clinical and experimental-biological examination that the causative allergen was a volatile substance soluble in petrol-ether. The writers consider this substance to be identical with the odoriferous material or scent of sage-oil.

Five cases of idiosyncrasy to oil of citron exhibited different combined reactions of the skin and mucous membranes in individual cases. In two of these cases it was possible to excite cutaneous manifestations and in one case a definite focal reaction (illustrated) by eating lemon peel.

Reference is made to the importance of these cases in view of the problem set by those hay fever cases in which the causative allergen apparently exists in odoriferous particles rather than in pollen proteid. J. B. HORGAN.

Miscellaneous

The Diagnosis of Chronic Infective Foci in the Oral Cavity. H. PASSLER. (*Münch. Med. Wochenschrift*, Nrs. 45 and 46, Jahr. 78.)

The examination of a patient is incomplete if the presence or absence of oral sepsis has not been ascertained. The presence of a septic focus in the mouth can be seen by any medical man. Special methods of examination are but exceptionally required. Adequate examination of the tonsils can be undertaken by anyone conversant with such simple means as are described. Many radiograms are necessary for the examination of the teeth. The clinical signs of chronic infective foci in the tonsils and in regard to the teeth and their importance are described. In the infrequent cases in which doubt exists and in which the advice of the specialist is requisite, a mutual conference between the latter and the physician is advised.

As in many individuals there are several or even numerous septic foci, any one of which may be responsible for the secondary illness, it is clear that it is of great importance to determine all foci present if treatment is to prove successful. J. B. HORGAN.

Histological Retrogression of Lympho-epitheliomata after Röntgen Radiation. A. TOBECK (Göttingen). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Vol. xxx., Part 2, p. 182.)

The tumours in question contain an epithelial and a lymphocytic factor. Opinions are divided as to the relation between the two. Under radiation it was found that the epithelial element was the first of the two to undergo retrogression, giving place to granulation tissue which became cicatricial. Tobeck considers it questionable whether lympho-epitheliomata should be looked upon as a group of themselves, but that they consist rather of juvenile epithelial cells only slightly differentiated and, therefore, all the more sensitive to radiation, with secondary infiltration with lymphocytes. In the author's cases they grew out from the tonsils, but Zuppinger finds them most frequent in the epipharynx, and others have been known to originate in the larynx and in the thymus. Ewing discusses them (*Amer. Journ. Pathol.* 5, 1929). JAMES DUNDAS-GRANT.

The Lactic Acid Content of the Blood in Experimental and Pathological Mouth-breathing. P. KREEWINSCH. (*Acta Oto-Laryngologica*, Vol. xvii., Fasc. 1.)

There exists a widespread impression that mouth-breathing has an inhibitory effect on the gaseous exchange in the lungs, stress being laid sometimes on the deficiency of oxygen and sometimes on the excess of carbonic acid.

As the lactic acid content of the blood in man can be determined

with sufficient accuracy and without much difficulty, and gives, under proper conditions, a measure of the oxygen supply of the tissues, the author has investigated its quantity in the blood of mouth-breathers, both artificial and pathological.

In thirty normal nose-breathers the average lactic acid content was 19·4 mgr. per cent. Artificial prevention of nasal breathing caused a rise, in the first hour, of 35 per cent., with a return to normal an hour after the re-establishment of nasal breathing. Pathological mouth-breathers showed a lactic acid content about 35 per cent. higher than nose-breathers; in the former it is, therefore, a permanent condition.

This increase of lactic acid is to be regarded as an expression of a degree of tissue dyspnœa resulting from increased venosity of the blood (anoxæmia.)

The author discusses also the chemical regulation of respiration in mouth-breathers, and concludes that the increase of lactic acid in the blood is a part of the chemical self-regulatory mechanism of respiration.

It is not possible to determine with certainty how far the tissue dyspnœa in mouth-breathers is responsible for interference with their health, but it is probable that the central nervous system is the first to suffer. THOMAS GUTHRIE.

REVIEWS OF BOOKS

Division Palatine. By VICTOR VEAU. With the collaboration of Mme. S. Borel. Masson et Cie. Price 140 francs.

This book forms an excellent treatise on the subject of cleft palate and may well serve as a model of arrangement for any writer of a text-book. The early chapters are well illustrated. The case records, and more particularly the frank criticism of the methods, add considerably to the value of the book.

Traitement du Bec-de-Lievre Unilateral. By VICTOR VEAU. Masson et Cie. Price 30 francs.

The author analyses in the earlier chapters the essentials in the shape and form of the normal lip, and with these facts in mind makes them the cosmetic ideal of the complete operation. All the better-known European and American methods are discussed and described. One is surprised to find that chloroform is the anæsthetic of choice for the operation. Then there is a useful bibliography.