to be "straw-coloured, clear and sterile." On the third day the flow of cerebro-spinal fluid from the labyrinth ceased. There was temporary facial paralysis. Recovery uninterrupted.

Two Cases of Gunshot Wound of the Temporal Bone—THE PRESIDENT and Sir JAMES DUNDAS-GRANT.—In both there was extensive caries of bone. The radical mastoid operation, followed by grafting, gave excellent results.

ABSTRACTS

EAR

Invasion of the Internal Ear by Tympanic Suppuration. I. FRIESNER. (New York, *American Journal of Surgery*, May 1920.)

The infection is much more frequently chronic than acute. The most frequent of the acute infections is that associated with scarlatina. In this, by reason of the virulence of the organism, there is a rapid sloughing of the tissues of the middle ear, and often a caries of the outer labyrinthine wall, and invasion, and more or less complete destruction, of the labyrinth. Even in such fulminating processes, however, the pathway of the labyrinthine invasion strongly influences not only the extent of the destruction within the labyrinth but the type of intracranial complication should this occur. When infection occurs through the solid walls of the labyrinth, the invasion is less rapid and less frequently fatal than when by the windows. It is for this reason that, while clinical observations show more fistulæ in the semi-circular canal, post-mortem findings show fistulæ in the windows as the most common pathway. Inflammation of the bony wall of the labyrinth, with fistula formation, usually at the point of maximum exposure of the external semicircular canal, generally follows chronic middle ear suppuration, either with cholesteatoma or tuberculosis. A fistula may, however, occur with an acute or subacute mastoiditis. Even before the formation of an actual fistula there is an internal reaction, a thickening of the endosteum and trabeculæ supporting the membrane, and it is this protective reaction against invasion which probably accounts for the labyrinthine symptoms which precede the formation of a definite fistula. It has long been noticed that the "fistula reaction" varies considerably in the type and direction of the resulting nystagmus, especially in tuberculous cases. The post-mortem examination of one such case which gave a reaction against the rule, showed the fistula in the external semicircular canal to be both tortuous and

oblique—a common feature of tuberculous bone fistulæ in general. The obliquity of the fistula, *i.e.*, towards or away from the ampulla, aided possibly by occlusion of the membranous canal on one side or the other of the fistula, must play an important part in determining the type of the nystagmus in the so-called "fistula reaction."

The labyrinthine wall once penetrated, resistance may for a time circumscribe the infection, but sooner or later a diffuse labyrinthitis results. GILBERT CHUBB.

Comparative Anatomy of the Mastoid Process. LÉONHARD. (*Revue de Laryngologie*, January 1921.)

The writer points out that the growth of the mastoid process in infants and young children proceeds *pari passu* with the assumption by them of the erect position. In the erect position the balancing of the head on the vertebral column is chiefly effected by the traction of the sterno-mastoid muscle. The greater development of the mastoid in human as compared with animal skulls is due to the erect position of the head. G. WILKINSON.

The Caloric Test in the New-born. A. THORNVAL. (*Acta Oto-laryngologica*, Vol. ii., fasc. 4.)

Bárány and others have found that the vestibular movements of the head during and after rotation can be observed much more distinctly in the new-born than in adults. As regards the caloric test, on the other hand, the position appears to be less clear. Hald in Denmark and Ruttin in Vienna came to the conclusion that it is not often possible to elicit nystagmus after caloric stimulation in the new-born.

The writer examined 74 infants of ages from 4 hours to 8 days, and obtained the reaction rapidly and definitely in all cases, but with certain differences from what is observed in adults.

Very young infants resemble persons under the influence of an anæsthetic in that the power of voluntary fixation is absent. Hence, in both, the eyes show a tendency to hesitate in the slow phase of the nystagmus, and this has probably given rise to the idea that the reaction cannot be provoked in some infants. As a rule there is a true and definite nystagmus, but usually with the hesitation mentioned. The direction of the nystagmus, moreover, is altered, exactly as would be expected, by a change in the position of the infant. Reflex movements of the head, but not of the extremities, are observed in many infants after the caloric as after the rotation test. THOMAS GUTHRIE.

The Histology of Traumatic Deaf-Mutism. ALEXANDER. (*Monats. f. Ohrenh.*, Year 55, Vol. i.)

Commencing with a quotation of certain cases dating back to 1842, in which this aspect has been studied, and continuing with a historical

survey of the literature on this subject, the author gives a minute account of one of his own cases.

The patient, a man aged 37, was severely injured in an accident on 29th of January 1912, from which he died in two days. A detailed account is given of the histological condition of both ears.

The only reference to his previous deaf-mutism is a note to the effect that he was known to have been a deaf-mute, as the result of an injury, since childhood. The article is illustrated by clear diagrams of the normal inner ear and of the pathological conditions discovered. The author's findings, which of course embrace varying forms of osteitis, epithelial and nerve degenerations, correspond generally with what is already known. ALEX. R. TWEEDIE.

Vertigo. SYDNEY SCOTT. (*Lancet*, 1920, Vol. x., p. 535.)

Mr Scott deals here with vertigo, especially in respect of its surgical and medical treatment. He discusses its frequency, and points out how it may be so completely overshadowed by more obvious disturbances (vomiting, titubation, faintness) as to throw physicians off the scent. On the other hand, vertigo may mask other complaints; it may be cardiac, gastric, renal, or referable to local hæmorrhage or infection. The writer points out the occasional vertigo due to unilateral Eustachian inefficiency. Indications are given as to treatment.

MACLEOD YEARSLEY.

Facial Paralysis as an Indication for Mastoid Operation in Acute Middle-ear Suppuration. B. DYBWAD DANELIUS. (*Acta Oto-laryngologica*, Vol. ii., fasc. 3.)

In cases of labyrinth destruction sequestra may exert direct pressure on the nerve, but paralysis in acute otitis media must clearly very seldom be due to gross lesions of this sort. The paralysis is usually attributable to hyperæmia in the region of the stylo-mastoid artery, collateral œdema, or toxic influences. A similar condition occurs in the case of the optic nerve in association with certain diseases of the accessory sinuses.

Mygind regards the paralysis as an absolute indication for operation, but not as an infallible sign of osteitis. Denker holds the same view, while Heine and Alexander consider that the question of operation is only to be decided by a consideration of the case as a whole.

Among 700 cases of mastoid operation in acute otitis, paralysis was present in 7. In all of these it was of the peripheral variety, and in all the mastoid region was normal, so that the paralysis or paresis was the only symptom indicating operation. The short histories of these cases show that in two of them osteitis was absent,

in two present to a slight degree, and in three was marked. Since therefore it is not possible to exclude in such cases the presence of serious bone disease the paralysis should be regarded as a definite indication for operation; and this view is supported by the fact that in five of the seven patients the paralysis began to clear up immediately after the operation, so that a causal connection between the operation and the improvement was obvious. THOMAS GUTHRIE.

The Chances of Cure of Mastoiditis by Tentative Tonsillo-Adenectomy. OTTO GLOGAU. (*The Laryngoscope*, 1920, Vol. xxx., p. 83.)

The author holds that hypertrophied and diseased adenoids and tonsils form a constant source of infection and reinfection for the middle ear. Removal should be urged during the acute suppurative stage of otitis media, and should by all means be performed if the discharge lasts longer than three weeks. Paracentesis should also be done. The classical mastoid symptoms (pain, fever, sagging, redness or swelling over the mastoid) are nature's last danger signals for the removal of the offending adenoids and tonsils. By the restoration of tubal drainage and aeration, together with the depletion of the naso-pharynx, the restorative forces of nature are helped to overcome the infection of both the mastoid and the middle ear. Pain, fever, and tenderness gradually decrease. Even sagging of the canal wall and œdema over the mastoid region will disappear within a short time. According to Glogau the removal of tonsils and adenoids is a curative factor even in the acute mastoid exacerbation of chronic conditions.

Cases of involvement of the labyrinth or the sinus, those complicating infectious diseases, and those with necrosis of the bone as demonstrated by the Roentgen picture, are excluded from tentative tonsillo-adenectomy. In all other cases of mastoiditis in children up to the age of eight the "offensive lymph tissue" should be extirpated, even at the critical stage of the disease. (Ten cases are recorded.) It is not claimed that every case of even mild mastoiditis will be cured by tentative tonsillo-adenectomy. The suggestion is only made that we should give the patient a chance of having a major operation replaced by a minor one. J. S. FRASER.

Cure of Chronic Purulent Otitis Media. J. G. CALLISON. (*The Laryngoscope*, Vol. xxx., 1920, No. 11, p. 757.)

The writer advises a saturated solution of nitrate of silver.

Method.—Patients are seen at intervals of from four to seven days. The ear is carefully cleaned and dried with cotton applicators. As much pus as possible is now removed by suction and the ear again carefully dried. Then, under direct vision, the saturated solution of

nitrate of silver is carefully applied to the fundus, allowing it to penetrate as far as possible beneath the edges of the drum remnants, and into the Eustachian tube. In *exceptional cases* this procedure causes pain, and it is well to begin with a 25 per cent. solution and increase to 50 per cent., and then to a saturated solution. If a free discharge of pus is present, the patient is instructed to irrigate the ear once or twice a day with boric lotion. After irrigation the ear is dried, and about five drops of the above solution placed in the ear. The treatment is continued until long after the ear seems to be dry. The time required to effect a cure has varied from a few weeks to several months. J. S. FRASER.

Observations on Three Cases of Deafness from Hereditary Syphilis. C. HENNEBERT. (*Arch. Ital. di Otol.*, Vol. xxxi., No. 3, 1920.)

Deafness from hereditary syphilis may come on as late as 22 or 28 years, according to previous investigations by Hennebert. In the first of the cases referred to here the deafness had come on in infancy, in the second at the age of 15, and in the third at 8 years. In the third case the deafness progressed rapidly and was complete in two months. In the first two patients there was some hearing power left. Rotation tests on the first case gave nystagmus to one side for twenty seconds, and none to the other side. In the second case there were only a few jerks to either side. In the third case the rotation tests gave normal responses. The caloric reactions were negative in the first two cases and positive in the third case. The pneumatic or fistula test was positive in the first two cases. In Hennebert's experience the pneumatic test is generally positive, the rotation test negative, and the caloric test diminished. J. K. MILNE DICKIE.

Popular Fallacies in the Practice of Otology. GEORGE E. SHAMBAUGH. (*The Laryngoscope*, Vol. xxx., 1920, No. 11, p. 683.)

The most striking fallacy is the assumption that any existing alteration in the nasal passages, especially the common anatomical irregularity of the nasal septum and the compensatory enlargement of the lower and middle turbinated bodies, are causes of middle ear disease. Another common fallacy is to assume that in all cases of obstructive middle-ear deafness long-continued inflation of the middle ear is indicated. In primary fixation of the stapes and in most cases of chronic adhesive middle-ear catarrh, inflation does no good. A third fallacy is that all cases of chronic discharge from the ear, which cannot be checked by local treatment in a reasonable period, are cases where radical surgical measures are called for. Most cases of chronic discharging ears are not a serious menace to the patient in the sense that they may lead to

an intracranial complication. We have, as a rule, little difficulty in differentiating the dangerous from the non-dangerous cases. The presence, after the radical mastoid, of moisture which comes from the patulous Eustachian tube is not an indication that the operation has been a failure. J. S. FRASER.

NASO-PHARYNX AND PHARYNX.

Complete Alopecia Areata of the Scalp treated by Removal of Tonsils and Adenoids, and by Vaccines. H. W. BARBER. (*Proc. R.S.M., Sect. of Dermatology*, March 1921, p. 53.)

Boy aged 12. Complete alopecia of five years' duration. Chronic rhinitis. Tonsils very hypertrophied, and large mass of adenoids with constant muco-purulent discharge. Tonsils were enucleated and adenoids removed, and cultures made from the tonsils. The growth was chiefly of *Streptococcus pyogenes longus*, from which vaccines were made and administered for about five months. Within two months of operation, hair was growing freely and patient has now almost a complete re-growth of normal hair. G. B. BRAND.

Foreign Body (Chewing-gum) in the Naso-Pharynx. ORENDORFF. (*Journ. Amer. Med. Assoc.*, 13th November 1920.)

A patient, aged 13 years, presented typical symptoms of adenoids. Inspection of the throat revealed a slight convexity of the soft palate which was assumed to be due to a large mass of adenoids. No examination with a post-nasal mirror or by palpation was made. At operation the curette brought away a mass of ordinary chewing-gum and a little adenoid tissue. The child was found to be an inveterate user of chewing-gum, which he kept in his mouth while in bed. PERRY GOLDSMITH.

The Removal of Adenoids in Infancy. HUNTER TOD. (*Practitioner*, November 1920.)

Nasal obstruction is a serious matter in infancy, owing to the interference with breathing, and also with nutrition. The younger the child, the more serious are the consequences. Objections to the removal of adenoids at an early age are seldom justified, although there may be a return of the growths in a small proportion of cases. Under the age of six months no anæsthetic is required. The infant is held in a sitting position, while the adenoids are removed by a single sweep of a small curette. After operation the infant breathes quietly and sucks with comfort, and otorrhœa and bronchitis disappear. DOUGLAS GUTHRIE.

Larynx

Multiple Bone Formation in the Tonsils. CALHOUN. (*The Laryngoscope*, 1920, Vol. xxx., p. 428.)

Cartilaginous or bony deposits in the tonsil are supposedly due to vestigial remnants of the second branchial cleft, or to a metaplasia occurring in fibrous tissue. *Case*—Man of 40 years, had several attacks of sore throat. The tonsils were removed under local anæsthesia, but there was the sensation of cutting through very tough tissue. Both tonsils contained in their substance numerous hard bodies, smooth and white, of varying sizes. Microscopic examination showed them to be bone. J. S. FRASER.

LARYNX.

Ulcero-Membranous Laryngitis of Streptococcic Origin. J. A. M. HEMMEON. (*Brit. Med. Journ.*, 17th May 1919.)

During October and November 1918 a series of cases of laryngitis was admitted to No. 3 Canadian General Hospital, Boulogne, both from the front and base areas, presenting unique features both in their laryngeal pictures and in the almost complete absence of general symptoms. No attempt is made to trace their connection with any of the influenzal or other streptococcic infections then prevalent. Similar conditions of the larynx were not seen in patients suffering from influenza in hospital at that time. Fifty cases were observed.

Onset.—Usually malaise, headache and pain in limbs. Temperature in ten cases rose to 102°; in fifteen varied from 99° to 101°; and in twenty-five remained normal.

Laryngeal Symptoms.—Cough, hoarseness (10) or aphonia (40) developed in from one to five days. Recovery was complete in from eight to twenty-five days (average seventeen days).

Objective Signs.—The vocal cords showed ulcero-membranous changes, usually the middle third of the cords was involved, and in this respect the picture resembled that of traumatic laryngitis from gas. The greyish translucent membrane lay symmetrically on both cords, and might involve as much as two-thirds of their upper surface and free edge. The membrane could be removed with difficulty by grasping with forceps or rubbing with a cotton swab. A raw bleeding surface was left which was quickly covered again by membrane. After the third or fourth day the edges of the membrane were seen to be curling up, or might have been removed, and a shallow ulcerated surface was exposed. The free edges of the cord were invariably involved, and very early

showed thickening, and later a "mouse-nibbled" appearance. The arytenoids and ventricular bands were unaffected.

Treatment consisted in resting the voice completely, stopping smoking, and inhaling medicated steam.

After the disappearance of the membrane the cords were red, injected and somewhat thickened or roughened at the edges.

Bacteriology.—Cultures were taken from the cords under indirect and direct laryngoscopy. Of 50 cultures, 35 showed streptococci in almost pure growth; 10 showed the same as the prevailing organism; and the remainder were indefinite. Of the 35 streptococcic growths, 25 were classified as streptococcus hæmolyticus and 10 were streptococcus viridans.

A. Brown Kelly.

REVIEW OF BOOK

The Catarrhal and Suppurative Diseases of the Accessory Sinuses of the Nose. Ross Hall Skillern, M.D., Professor of Laryngology, Medico-Chirurgical College, Post-Graduate School, University of Pennsylvania, etc. 300 Illustrations. Third Edition, thoroughly revised and enlarged. 1920: J. B. Lippincott Company, Philadelphia and London. Price 30s. net.

The fact that this is the third edition of this book in seven years may be taken as a fair criterion of its popularity. It has been difficult to add anything new in this limited field of a limited specialty during the last rather strenuous years, but Dr Skillern has endeavoured to collect what fresh material there was and present it to his readers in an interesting and lucid manner. The first hundred pages are devoted to the anatomy of the outer wall of the nose and general considerations of sinus disease. The formation of the outer wall is minutely described and the illustrations are clear and illuminate the text. It is a little doubtful, perhaps, if the author makes any clearer the positions of those bugbears of the student—the hiatus semilunaris, the infundibulum, and the fronto-nasal duct. The views of various investigators on the physiology of the sinuses and their rôle in respiration are well presented and discussed. Tables are given showing the relative occurrence of the different bacteria in sinus suppuration and the pathology of the complications encountered in rhinological practice.

The first section deals with the maxillary antrum. Normal anatomy and various abnormalities are described and illustrated. The view is expressed that naso-antral polypus is usually cured by