ABSTRACTS

EAR

On the Histology and Pathogenesis of Mastoiditis in Infantile Toxic Conditions. J. MAYER. *Monatsschrift für Ohrenheilkunde*, 1950, lxxxiv, 283.

This paper is based on seventeen cases of infantile gastro-enteritis associated with mastoid disease. All cases underwent bilateral mastoidectomy, and the bone obtained at operation was histologically examined. Without exception, a latent osteomyelitis was found to be present. This was regarded as the primary focus. The relationship between the pathological bone condition and the enteritis is discussed. These cases do not react well to antibiotics, and mastoidectomy (antrotomy) should be carried out before the general condition has deteriorated too far. If there is any doubt on examination of the drum-head, antrum puncture should be done and, on positive findings, a mastoidectomy performed. D. BROWN KELLY.

Histological Study of the Temporal Bone of a Patient with Otosclerosis. HOLLIE E. MCHUGH, Montreal, and GEORGE E. SHAMBAUGH, Chicago. *Acta Oto-laryngologica*, 1951, xxxix, 5.

The authors present the histological details of the temporal bone of a patient with otosclerosis who had a fenestration operation twenty-two months prior to death from multiple myeloma, an opportunity which has rarely been afforded the surgeon. The histological study confirmed fixation of the stapes and continued patency of the fenestra twenty-two months following operation. It also appeared to confirm the principles of surgical technique to control osteogenesis with which Dr. Shambaugh had carried out the fenestration operation: (1) enchrondralization of the fenestra, (2) the micro-immaculate removal of bone-dust particles with the help of continuous suction-irrigation and the operating microscope, (3) careful preservation of the endosteal membrane up to sharp margins of the fenestra to permit union with the skin flap over the " domed " fenestra, and (4) utilization of the inhibiting influence of squamous epithelium on osteogenesis by a glove-like fit of the thin skin flap to the edges of the domed fenestra. R. SCOTT STEVENSON.

Is Hearing Loss due to Nutritional Deficiency? Further Studies on the Influence of Vitamin A in Certain Types of Impaired Hearing. M. JOSEPH LOBEL, New York. *Archives of Otolaryngology*, 1951, liii, 515.

The present clinical study seems to confirm the views held by some workers that vitamin deficiency and hearing loss are in some manner related. Results of clinical trials with a new injectable Vitamin A preparation hold out promise of its therapeutic value in certain types of deafness. Despite the fact that in some instances the hearing loss was not influenced, the accompanying tinnitus was greatly relieved. R. B. LUMSDEN.

Abstracts

Fractures of the Petrous Pyramid: Report of a Case with Histological Observations Eight Years after Injury. JOSEPH G. DRUSS, New York. *Archives of Otolaryngology*, 1951, liii, 540.

The main forms of fractures of the petrous pyramid are outlined and their characteristic features described. The clinical and histopathological findings in a case of combined longitudinal and transverse (microscopic) fractures of the temporal bone in a patient who died eight years after injury to the skull are recorded and correlated. Of the histological changes noted, perhaps one of the most striking was the relatively incomplete healing that took place within the fracture lines of the petrosa in spite of the chronicity of the condition. There are nine microphotographs.

R. B. LUMSDEN.

Mastoiditis treated with Penicillin and other Antibiotics. W. MCKENZIE, London. *Lancet*, 1951, ii, 63.

The author points out that in spite of the widespread use of penicillin and other antibiotics such as streptomycin and aureomycin, Schwartze mastoidectomy is still a necessary part of the treatment of acute suppurative otitis media. Since February, 1948, he has admitted 161 patients to hospital with this condition, and of these 12 underwent a Schwartze mastoidectomy. This is a small figure compared with the Edinburgh Royal Infirmary figures in 1924 (Scott *et al.*, *J. Laryng. and Otol.*, 1925, xl, 519), when 87 mastoid operations were done in 249 admissions, before sulphonamides or antibiotics were used, but it is not a negligible figure. The author gives details of his cases, in 4 of which the infecting organism was resistant to penicillin.

R. SCOTT STEVENSON.

NOSE

The Bárány Operation in Cases of Frontal Sinusitis: Results of Treatment. JAAKKO S. LUMIO, Helsinki. *Acta Otolaryngologica*, 1951, xxxix, 32.

The author reviews the history of operations upon the frontal sinus, and gives the details and results of 100 frontal sinus operations according to Bárány's method in Professor Meurman's clinic at Helsinki during the period 1930 to 1949; it has proved a valuable and successful method in suppurative frontal sinusitis. Bárány presented his method in Stockholm in 1924, opening the frontal sinus from below and removing the floor, but disturbing the mucous membrane as little as possible and leaving the anterior wall of the sinus; the ethmoid cells are carefully exposed, and flaps are made from the vestibular mucous membrane to line the ostium, attached into position with a rubber tube, a wide communication being obtained between the frontal sinus and the vestibule of the nose. It may be pointed out that this is practically the same operation as that known in Britain and elsewhere as Howarth's operation, details of which (with results of over 200 cases) were published in this journal in 1921, with further modifications of technique in 1936 (*Journal Laryng. and Otol.*, 1936, li, 387).

R. SCOTT STEVENSON.

Larynx

Distribution and Comparison of Nasal Cilia. G. EDWARD TREMBLE, Montreal. *Archives of Otolaryngology*, 1951, liii, 483.

In general, the thickness of nasal mucous membrane is dependent on the degree of impact and air flow over the surface. For instance, the exposed inactive anterior one-third of the septum and lateral wall has a thick membrane of 10 to 15 cells in depth, while the membrane in the active posterior two-thirds has a layer of only 8 to 10 cells. In protected areas not influenced by direct air currents, such as the middle and inferior meati, the cells are 4 to 5 layers deep, and the membrane is thinnest of all in the sinuses, where the exchange of air is negligible. The mucosal lining of the sinuses consists of only 2 or 3 layers of short cuboidal cells and is often only a fraction of a millimeter in thickness. Except for the ethmoid cells, the stroma is loosely attached to the sinuses. The more exposure to outside air laden with dust, smoke and fumes of all kinds, the thicker is the epithelium; the less exposure to these influences, the thinner the membrane. The depth of the stroma containing the blood vessels is in proportion to the depth of the epithelial layer. The stroma is widest in the exposed anterior portion of the nose and disappears almost entirely in the sinuses.

R. B. LUMSDEN.

LARYNX

Large Laryngeal Diverticula. LT.-COL. A. J. CLYNE, R.A.M.C., Kuala Lumpur. *British Medical Journal*, 1951, ii, 30.

Large laryngeal diverticula, although a normal condition in primates, are rare in man. The author reports the case of a soldier aged 24, with a history of swelling on the left side of the neck of twelve months' duration. Two weeks later increasing hoarseness developed. Diagnosis was confirmed by asking the patient to hold his nose and blow, when the swelling distended, filling most of the anterior triangle of the neck, and it could then be emptied by pressure. X-ray examination showed air sacs on each side of the thyroid cartilage. The large left laryngeal diverticulum was removed by dissection through a collar incision in the neck; the sac on the right side, which was symptomless, was not touched. After operation the voice returned to normal almost immediately.

R. SCOTT STEVENSON.

MISCELLANEOUS

Bleeding in the Carotid Canal and Its Treatment. F. CHLANDA. *Monatsschrift für Ohrenheilkunde*, 1950, lxxxiv, 287.

The exposure of the carotid artery in the Ramadier operation is not without risk. The danger is not so much that of gross injury to the vessel during the primary bone excavation, but the slight unavoidable trauma to its walls from bone splinters or rough bone edges. Damage may also occur while lifting the artery from its canal. The hæmorrhage, which in most of the recorded cases occurred on the first post-operative day, or after removal of packing, is due to softening of the arterial wall from inflammation causing a spontaneous rupture. This may follow the slightest injury, even the pressure of a rubber drainage

tube. Such bleeding cannot always be controlled by tying the central exposed part of the artery. Ligation of the vessel peripheral to the bleeding point in the carotid canal may be required, as advised by Precechtel. No special instrument is necessary; a small needle such as is used for under-running vessels in tonsillectomies will suffice. If the artery is well exposed at the primary operation, further exposure carried out in the presence of severe bleeding should not be necessary.

D. Brown Kelly.

Otological Applications of Audiology. R. E. Jordan, Pittsburgh. *Journal of Speech and Hearing Disorders*, 1951, xvi, 115.

The author points out that audiology is a new specialty whose borders of activity are as yet not well enough defined to be circumscribed by definition. The term audiologist is restricted by him to those persons who have had extensive training, specialization, and experience in dealing with hearing and hearing loss in individuals. Since the otologist also deals with hearing and hearing loss, both special fields have a common basic problem. Working together and pooling their respective views, these two specialties should increase the rate of advancement in problems of hearing and hearing loss. The delay in co-ordination may be due to the fact that audiology originated in the college speech clinic (now renamed speech and hearing clinic) and not the medical school. The primary functions of these clinics was the training of students and not the treatment of patients. Audiologists emerging from such a background could see little need for close association with otology. In addition, some audiologists received their early training in military audiological centres, where the over-all direction of the programme was nominally under a medical officer, but where the true guidance often came from the audiologist. What the audiologist did not see clearly was that the individuals who went through the military hearing centres had already been screened otologically. Clinical audiologists are still being trained in speech and hearing departments of universities where contact with otology and, indeed, other branches of medicine is conspicuous by its absence or at best is merely occasional. Audiology is now at a stage of development where it functions best in close co-operation with the medical profession. In the experience of the author, who is associate professor of otology at the University of Pittsburgh, audiology has filled an important gap in the handling of the hard of hearing patient.

R. Scott Stevenson.