ABSTRACTS

EAR

New Neurosurgical Approach for Treatment of Otosclerosis. MANUEL BORDES-VALLS, Valencia, Spain. *Archives of Otolaryngology*, 1950, li, 96.

Through a temporal craniotomy, the dura is elevated until the arcuate eminence becomes visible. The tegmen tympani is perforated and through the hole in the tegmen the window is made in the anterior portion of the lateral semicircular canal. One case is reported by the author.

R. B. LUMSDEN.

Ménière's Syndrome. Observations on Vitamin Deficiency as the Causative Factor: III. The General Disturbance. MILES ATKINSON, New York. *Archives of Otolaryngology*, 1950, li, 149.

1. Some of the many and disparate symptoms and signs of disturbance in symptoms other than the vestibular and cochlear have been listed.

2. It has been shown that these disturbances can be readily explained on the basis of vitamin deficiency and can be relieved by the same vitamin treatment that controls the aural manifestations.

3. These observations form another link in the chain of evidence pointing to Ménière's syndrome as a nutritional disturbance. (Author's summary.)

Investigations on the Topographical Determination of the Electrocochleogram. F. KREJCI and H. BORNSCHEIN. *Monatsschrift für Ohrenheilkunde*, 1950, lxxxiv, 1.

Experiments on tone localization in the cochlea were carried out on 21 guinea pigs under urethane anæsthesia. After operative exposure of the cochlea, the electrocochleogram was used in the measurement of cochlear potential. Only 16 of the 35 operated ears showed no evidence of functional disturbance on control measurement of cochlear potential. In all others, mechanical damage to the middle-ear apparatus rendered the experiment worthless. When switching over from the cochlear base electrode to the apex lead, a marked deviation towards the lower frequencies was observed in the potential amplitude-frequency curve. Thinning down the bony division at the cochlear apex was carried out in 7 cases. This resulted in an increase of potential amplitude without altering the typical frequency curve usually obtained from the apex lead. From the examination of 120 electrocochleograms information is obtained on the localizations of various tones in the cochlea.

D. BROWN KELLY.

Nasopharyngeal Irradiation and Hearing Acuity: a Follow Up of Children. STACY R. GUILD, Baltimore. *Laryngoscope*, 1950, lx, 55.

This is an important study and commentary on a subject about which many enthusiastic reports have been published in recent years, and which, on the

whole, are debunked by Dr. Guild in his usual dispassionate and coldly scientific manner. It is evident that previous ideas, widely prevalent, of the effect of nasopharyngeal lymphoid tissue on hearing and of the effect of nasopharyngeal irradiation on impaired hearing, need to be revised.

R. SCOTT STEVENSON.

LARYNX

Diagnosis and Treatment of Laryngeal Tumours. DANIEL S. CUNNING, New York. *Jour. Amer. Med. Assoc.*, 1950, cxlii, 73.

Persistent hoarseness continuing for a period of three weeks or more demands that every vestige of the larynx should be seen. A biopsy and pathological examination must, in the author's opinion, be done on all tumours of the larynx. The surgeon must determine in each case the course which should be pursued—operation or X-ray therapy or both. The results in five-year cures with X-ray therapy of early cordal cancers are on a par with those of surgical intervention. X-ray treatments should be given in divided doses and through small fields for a period of from thirty to forty days. In case of failure this amount for radiation does not interfere with the successful removal of the larynx.

ANGUS A. CAMPBELL.

Unilateral Paralysis of the Larynx. W. C. CALLAGHAN, Greensburg, Ind. *Archives of Otolaryngology*, 1949, l, 605.

This article is an attempt to correlate the material published since 1913 on the subject of unilateral paralysis of the larynx. There are five types of laryngeal paralysis: (1) congenital, (2) central, (3) peripheral, (4) myopathic and (5) psychogenic. The ætiological factors involved in the production of laryngeal paralysis may be grouped into four major divisions: (1) the nervous system; (2) diseases of the respiratory tract; (3) circulatory diseases; (4) diseases of the adjacent areas. The left recurrent nerve is the one most frequently involved in unilateral paralysis in the ratio of about 4 to 1 because of its peculiar anatomy. In summarizing the ætiological agents causing this condition, it is probable that hæmorrhage in the bulb is the commonest cause of the bulbar type of lesion, carcinoma of the upper third of the œsophagus the cause of a lesion in the hypopharynx, and aneurysm of the aorta the commonest cause of a lesion in the lower part of the neck, with surgical injury to the recurrent nerve in the neck following closely. Exact diagnosis of the cause of paralysis is not made in 20 per cent. of cases. Three cases are reported by the author. This is a concise and useful résumé, containing 14 references.

R. B. LUMSDEN.

Idiopathic Paralysis of the Vocal Cord: Fixation of the Vocal Cord without Anatomical Lesion. EMIL GLAS, New York. *Archives of Otolaryngology*, 1949, l, 612.

This form of paralysis is called idiopathic when the nerve *per se* is involved, uninfluenced by pressure from without. It is assumed that the involvement is a neuritis which affects all the fibres of the inferior laryngeal nerve, immobilizing the vocal cord in the co-called cadaveric position. When both crico-arytenoid

areas are normal, and when investigations of the neck and chest fail to explain a " cadaveric " cord, the laryngologist would do well to look for the pathognomonic tenderness on pressure deep in the neck in the area between the trachea and the œsophagus. This sign alone will clarify the diagnosis and eliminate wasteful investigations. Patients with this condition will respond to persistent treatment. R. B. LUMSDEN.

A New Intralaryngeal Approach in Arytenoidectomy in Bilateral Abductor Paralysis of the Vocal Cords : Report of Three Cases. WILLIAM C. THORNELL, Cincinnati. *Archives of Otolaryngology*, 1949, I, 634.

A new intralaryngeal approach is presented for the correction of the bilateral paralysis of the vocal cords which may follow removal of the thyroid gland. The results have been excellent in establishing a normal airway in three patients so treated. In two patients the voice has shown a slight improvement. In one patient the resulting voice was poor but adequate and recently has shown some tendency toward improvement.

R. B. LUMSDEN.

" High Pharyngeal Suture " to Avoid Supratracheal Fistula Formation after Total Laryngectomy. O. NOVOTNY. *Monatsschrift für Ohrenheilkunde*, 1950, lxxxiv, 59.

In order to avoid the formation of a supratracheal fistula after laryngectomy, a new method of closing the pharynx is recommended. This " high pharyngeal suture " consists in sewing the laryngeal muscles together in the mid-line in order to diminish the dead space between the pharyngeal wall and skin flap. The mucosa of the anterior pharyngeal wall is then sutured to the muscles about 2 cm. above the tracheostome.

D. BROWN KELLY.

NOSE

The Rôle of Sinusotomy and Needle-Puncture Irrigation in the Surgical Treatment of Frontal Sinus Infections. W. H. B. MAGAURAN, London. *The Medical Press*, 1949, 5772 : 589.

The purpose of this paper is to describe a new and simplified approach to the surgical treatment of frontal sinus infections.

The treatment consists first of a limited sinusotomy undertaken in order to evacuate the products of inflammation from the sinus, and to allow the application of chemotherapeutic agents to the intrasinus surfaces ; secondly, it consists of repeated needle-puncture irrigation of the sinus through the operation scar. Chemotherapeutic solutions appropriate to the infecting organisms are used for the purpose.

The treatment is undertaken in cases of acute and chronic frontal sinusitis which fail to resolve under suitable conservative measures including adequate treatment of infections and obstructions of the nasal fossae and related paranasal sinuses.

Sinusotomy is undertaken through a small incision downwards and slightly outwards over the middle of the inner third of the supraorbital border of the

frontal bone. Damage to the supraorbital vessels and nerve and the superior oblique muscle can, with this approach, be easily avoided so that troublesome frontal anæsthesia and diplopia are not to be feared. An oval area of bone is resected from the floor of the frontal sinus, about 1 cm. across and a little more from side to side. Surprisingly good access for removal of exudate and polypi, and examination of the sinus, is given *viâ* this route. Approach through the floor is undertaken in preference to an approach *viâ* the vertical frontal plate in order to avoid the diploic venous channels of that structure.

The cosmetic result of this incision is good, and needle-puncture of the sinus is subsequently carried out through the lower part of the scar.

The rationale of the treatment is based on the recognition of the importance of the conservation of ciliary activity and particularly of ostial ciliary activity which, within recent years, has been shown to be so necessary in sinus drainage.

It is also based on the author's favourable experience in the use of chemotherapeutic solutions in the irrigation treatment of maxillary sinus infections.

Post-operative irrigation by needle-puncture commended itself to the author in preference to catheter lavage *via* the fronto-nasal duct because it can be carried out repeatedly with ease, safety and certainty, and without risk of damage to the delicate ostial mucosa; and for these reasons this important part of the treatment can be performed whenever necessary by the non-specialist medical attendant.

Although a comparatively small number of cases of frontal sinus infection have been treated by sinusotomy and needle-puncture irrigation, the results in these cases, including two cases of advanced chronic frontal sinusitis with intrasinus polypi, are such as to suggest the likelihood of success of this treatment in many more cases of both acute and chronic frontal sinusitis. (Author's Abstract.)

Cylindroma of the Palate. A. Hager. *Monatsschrift für Ohrenheilkunde*, 1950, lxxxiv, 37.

The case is recorded of a woman aged 42 with a swelling of the hard palate. Biopsy proved the growth to be an "epithelioma basicellulare cylindromatosum". At operation, the neoplasm was found to fill the maxillary antrum on the affected side, and to have finger-like prolongations into the ethmoid and eustachian tube. After exenteration, radium was applied to the cavity. The patient remains without recurrence 19 months after operation.

After a review of the literature, the morphology, origin and clinical course of these neoplasms are described. Metastases are infrequent, although there is a tendency to local recurrence. Radical operation followed by radium is the treatment of choice. The article is illustrated with two photographs.

D. Brown Kelly.

ŒSOPHAGUS

Congenital Atresia of the Œsophagus. P. P. Rickham, Liverpool. *British Medical Journal*, 1950, i, 940.

The author reports a case of atresia of the œsophagus successfully treated by anastomosis. A full-term female child weighing 8½ lbs. was admitted to hospital with a history of regurgitation of all feeds since birth, associated with

coughing, choking and cyanosis, and X-ray examination revealed the œsophagus as a dilated blind pouch ending at the level of the third thoracic vertebra. Endotracheal oxygen and ether was supplemented by curare and the œsophagus was approached by way of an incision along the fourth intercostal space, the pleura being separated in an upwards and backwards direction. The lower œsophageal segment was found attached to the back of the trachea just above its bifurcation, and the two segments were anastomosed by a single layer of interrupted silk sutures around a thin rubber catheter. Intravenous glucose-saline infusions were given, and penicillin orally and by intramuscular injection the child being nursed in an oxygen tent. Oral feeding was instituted 36 hours after operation, at first using saline coloured with gentian violet to detect any leak from the anastomosis, and then breast milk. The child made an uninterrupted recovery.

R. Scott Stevenson.

MISCELLANEOUS

Bronchial Adenoma. Herman J. Moersch and John R. McDonald, Rochester, Minn. *Jour. Amer. Med. Assoc.*, 1950, cxlii, 299.

The authors base their studies on 86 patients in whom the diagnosis of adenoma of the bronchus was established by microscopic examination. The disease attacks both sexes about equally and the ages varied from 15 to 67 years. The majority of patients complained of cough, hæmoptysis and pain, while the minority complained of chills, fever, dyspnœa and wheezing. The average duration of symptoms before the diagnosis was established was 30 months. Most of the patients presented positive X-ray findings, but in 20 cases X-rays were negative. Tomography and bronchography were found to be of great value. All adenomas tend to polypoid projection into the bronchus and are readily visible on bronchoscopy. The tumours are red and hæmorrhagic in appearance. Cytological studies of the sputum and bronchial secretions were consistently negative. Adenoma of the bronchus should be considered a carcinoma of low grade malignancy that presents ability to metastasize. An adenoma which is pedunculated and situated where it can readily be removed is best treated by bronchoscopy. Older patients and those whose lesion is situated so close to the carina that pneumonectomy would have to be performed are also best treated by bronchoscopic means. Later, repeated bronchoscopic examinations should be made because of the possibility of recurrence. Surgical treatment is advisable for all other cases and where recurrence has taken place. The article has 5 figures and 4 tables.

Angus A. Campbell.

Some Trends in Otolaryngology. Henry B. Orton, Newark, N.J. *Journ. Amer. Med. Assoc.*, 1949, cxli, 749.

Many changes have taken place in the field of otolaryngology. This specialty which was originally an offshoot of medicine is now more closely related to surgery. Endoscopy is a field in which the thoracic surgeon and the bronchoscopist should work together as a team. The bronchoscopist should be thoroughly prepared by surgical training to treat peri-œsophageal infection, perforations of the cervical œsophagus and mediastinal emphysema, all of

which may be complications of œsophagoscopy and bronchoscopy. Oto-laryngologists of the future must be thoroughly trained in the principles not only of surgery but also of protein replacements and metabolism, fluid balance, treatment of shock, blood volume, pre-operative and post-operative measures, systemic complicating factors, organic disease and physiological considerations of thoracic surgery. With 18 per cent. of all malignant growths in the body above the clavicle, the otolaryngologist should be qualified to perform surgical procedures in this field. He should also deal with diverticula of the cervical œsophagus, resections of the neck, facial-maxillary surgery and thyroidectomies.

ANGUS A. CAMPBELL.

Peripheral Facial Paralysis in Fractures of the Temporal Bone: Indications for Surgical Repair of the Nerve. Report of Cases in which the Ballance and Duel Operation was used. KARSTEN KETTEL, Hilleröd, Denmark. *Archives of Otolaryngology*, 1950, li, 25.

There are definite indications for surgical repair of facial paralysis occurring in fractures of the temporal bone, as illustrated by cases from the literature and by a personal report. A survey is given of the difficulties which are encountered in selecting those cases for which repair of the facial nerve should be contemplated. The author arrives at the conclusion that an exploration of the facial nerve should be done in cases of immediate paralysis as soon as the patient's general state of health permits it, provided that a final diagnosis of a severe lesion of the nerve in an accessible place can be arrived at. In many cases this is impossible, but if after two months of observation there is no sign of returning function a severe lesion must be suspected, and, accordingly, a decompression is indicated. In the majority of cases of delayed paralysis, the first signs of returning mobility will be present within two months; should this not be the case, treatment similar to that of immediate paralysis must be instituted. In cases of long-standing paralysis with very little or no facial function an exploration should be done, provided the muscles have not atrophied and the site of damage can be located; there is nothing to lose and everything to gain. If, however, the patient has recovered partially and the function is fairly good, the indications for decompression should be narrowed considerably; a limited improvement may take place, but it is impossible to predict the outcome. If the place of injury is surgically inaccessible an anastomosis between the facial and another cranial nerve should be carried out. It is stressed that operations on the facial nerve should be undertaken only by otologists who have been trained for this special work.

R. B. LUMSDEN.

Prevention of Motion Sickness by Intravenous Injection of Sodium Bicarbonate. TAKATOSHI HASEGAWA, Osaka Municipal Medical College, Japan. *Archives of Otolaryngology*, 1949, l, 708.

Sodium bicarbonate injected intravenously can, according to this author, prevent motion sickness from occurring in man, probably by dissolving the otolithic crystals. It is also suggested that this injection may possibly be of value in Ménière's disease.

R. B. LUMSDEN.

Abstracts

Active Immunization against Secondary Bacterial Infections of the Common Cold. Archives of Otolaryngology, 1949, l, 687.

I. *Acquired Immunity in Mice Following Oral and Intra-Abdominal Administration of Stock Polyvalent Bacterial Vaccines.* JOHN A. KOLMER, Philadelphia.

The results of a study of acquired immunity in mice following the oral and intra-abdominal administration of tablets of stock polyvalent vaccines prepared of the desiccated organisms and their soluble products commonly involved in the etiology of the secondary bacterial infections of the common cold, are presented and discussed. Active immunity against hemolytic streptococci, types I, II and III pneumococci, K. pneumoniae (type A) and Staph. aureus was produced by the vaccines in a significant number of mice by both routes of administration. Immunity against the challenging organisms was not produced by the oral and intra-abdominal administration of placebo tablets. (Author's summary.)

II. *Production of Protective Antibodies in Human Adults by the Oral Administration of Stock Polyvalent Bacterial Vaccines.* JOHN A. KOLMER, AMEDEO BONDI, Jr. and CLARE SCHILLINGER, Philadelphia.

Enteric-coated tablets of stock polyvalent vaccines prepared of the desiccated bacteria and their soluble products commonly involved in the production of the secondary bacterial infections of the common cold were administered orally to 116 adults; placebo tablets were administered to 35 adults as controls. After administration of the tablets mouse protection tests were conducted with the serums of both groups for antibodies against hemolytic streptococci, type I pneumococci and K. pneumoniae. The oral administration of the placebo tablets did not produce protective antibodies against any of the three challenging organisms in 35 adults. The oral administration of tablets of the bacterial vaccines produced protective antibodies against hemolytic streptococci in 19·8 per cent., against type I pneumococci in 25 per cent. and against K. pneumoniae in 19·8 per cent. of 116 adults when the serums were tested against 2 minimum lethal doses of the respective organisms. The serums of some adults were found to contain natural protective antibodies against the three challenging organisms. These natural antibodies plus those produced by the vaccines accounted for the combined antibodies against hemolytic streptococci in approximately 31 per cent., against type I pneumococci in approximately 33·6 per cent. and against K. pneumoniae in approximately 36·2 per cent. of 116 adults.

Under the conditions of these experiments, it appears that the oral administration of tablets prepared of desiccated organisms and their soluble products may produce protective antibodies against hemolytic streptococci, type I pneumococci and K. pneumoniae in a statistically significant number of adults. (Authors' summary.)

Histiocytic Granuloma of the Skull. VICTOR GOODHILL, Los Angeles. *Laryngoscope*, 1950, lx, 1.

The author, who reports 18 cases of this disease (also called Letterer-Siwe's disease, Hand-Schüller-Christian's disease, and eosinophilic granuloma), considers that it is important for the otolaryngologist to be conscious of its relative frequency, inasmuch as it may simulate malignant tumours, lues,

tuberculosis and other diseases. The patient with an unexplained proptosis, an unexplained diabetes insipidus, and a temporal bone lesion of the chronic otorrhœa type, should be investigated by appropriate X-ray studies for the possibilities of a histiocytic granuloma. Of the 18 cases reported 11 had temporal bone lesions, 10 with chronic otorrhœa. The basic disease process is a dysplasia and hyperplasia of the histiocytic or so-called reticulo-endothelial system, creating granulomata which by predilection occur in certain parts of the body. The acute disease is characterized by its occurrence in early infancy and the mortality is extremely high. The subacute stage is typified by the clinical triad of proptosis, skull lesions and diabetes insipidus due to involvement of the sella turcica, with a relatively good prognosis, the patient's response to radiation being on the whole good. The chronic form of the disease, previously termed eosinophilic granuloma, is usually confined to the long bones but may occur in the calvarium, and responds equally well to surgery or radiation. R. SCOTT STEVENSON.

The Present Position of Facial Nerve Surgery. JOSEPHINE COLLIER, London. *Annals Otol., Rhinol. and Laryngol.*, 1949, lviii, 686.

An operative technique has been developed that minimizes formation of scar tissue, thus facilitating satisfactory nerve regeneration. Progress now is needed in three directions: first, we should consider whether we can improve the after-treatment of the radical mastoid cavity after nerve grafting so that early epithelization occurs without hampering regeneration of the nerve. In the second place there is need of better treatment of the denervated facial muscles to prevent wasting, stretching and the resulting weakness. Here we look to the physiotherapist and the plastic surgeon, with a warning to the physiotherapist not to allow attempts at movement until voluntary movement is possible. Finally and most important, there is a need for more precise indications for operation. In early cases, can degeneration be prevented, where, without interference, it is inevitable? In late cases, where degeneration has already occurred, what is the optimum time for exploration? In peripheral nerves the outlook after one year's denervation is very poor; how much more in the delicate facial muscles where muscle fibres are much more easily overcome by interstitial fibrosis. Hence the importance of an accurate history of onset and the correct interpretation of diagnostic aids to enable us to obtain as clear a picture as possible of the condition at the site of injury. (Author's summary.)

Thrombosis of the Cavernous Sinus. LOUIS K. ELFMAN, Philadelphia. *Archives of Otolaryngology*, 1950, li, 188.

The author, who reports a case with recovery, observes that in the future operations on the cavernous sinus itself will not even be considered. On the other hand, to control a septic phlebitis, besides the new medicaments surgical treatment should be done wherever possible and done promptly and thoroughly, in order (1) to eradicate the original focus of infection and (2) to institute free drainage from the original focus of infection. The sulphonamides and antibiotics will not eradicate a locked-up abscess in a bony cavity or in body tissues.
R. SCOTT STEVENSON.