ABSTRACTS

EAR

Fenestration of the Internal Ear, with Analysis of 33 Cases. B. W. TANTON, Vancouver, B.C. *Canadian Medical Association Journal,* 1950, lxii, 368.

" Fenestration of the internal ear for the relief of deafness caused by otosclerosis has been well established as an accepted procedure. The operative technique . . . has been so improved . . . that now we can give our suitable patients a better than 70 per cent. chance of regaining practical hearing." The author considers Lempert's cupula technique to be the best advance " in the past year " ; he regards pain or a sense of discomfort over the mastoid area as " not an infrequent complaint " in otosclerosis ; and he believes that a fenestration can be performed so long as the drumhead is intact and there is good cochlear function, as " the operation will help the deafness due to chronic adhesive otitis ". His only variation from the Lempert nov-ovalis technique consists in having his assistant to hold the flap against the anterior wall of the external meatus during the creation of the fenestra so that it cannot fall back and be caught in the drill. " Following-up consists of doing as little as possible in the way of cleaning the cavity." Thirty-three consecutive cases are reported and are divided for analysis into three categories based on the suggestion of Juers and Shambaugh. In Class A, the tuning-fork tests show a negative Rinne, with good perception for the 2048 fork by bone conduction with masking in the untested ear. Eighty-seven per cent. of 23 cases had " practical hearing " in this group. In Class B, the bone conduction for the 2048 fork is definitely diminished. In a group of 5 cases, only 60 per cent. had " practical hearing ". In Class C, there is no perception of the 2048 fork by bone conduction. In a further small group of 5 cases, none had " practical hearing ".

J. CHALMERS BALLANTYNE.

On Antistin Therapy of the Ménière Symptom Complex. K. BURIAN. *Monatsschrift für Ohrenheilkunde,* 1950, lxxxiv, 108.

The treatment of 15 cases of Ménière's symptom-complex with Antistin " Ciba " is described. Vertigo vanished in 10 cases completely, 4 were improved and 1 remained unaffected. Tinnitus disappeared in 3 patients. The impaired hearing was not improved.

D. BROWN KELLY.

Bone Conduction in Otosclerosis. R. R. WOODS, Dublin. *Archives of Otolaryngology,* 1950, li, 485.

Acuity of hearing for masked bone conduction before and after the fenestration operation has been investigated in a consecutive series of cases. Bone

conduction in the ears operated on showed an average improvement of 11·4 decibels. The ears not operated on were used as controls and showed no significant change. Ninety per cent. of the cases showed improvement of masked bone conduction following operation. Part, at least, therefore, of the loss of bone conduction in otosclerosis is reversible and cannot be attributed to atrophy of disuse or secondary nerve degeneration, or to any other condition which would produce an irreversible change. The results are analysed and the question of loss of bone conduction in otosclerosis is discussed. In otosclerosis, the first air conduction loss is in the low tones, while the first bone conduction loss shows itself in the high tones. In early cases both these losses are reversible by operation, the remaining air conduction loss being due to disorganization of the middle ear. In later cases neither air nor bone conduction losses are wholly reversible. The post-operative audiogram resembles that of an earlier stage of the disease. The opinion is expressed that stapes fixation, *per se*, causes a loss in bone conduction and that otosclerosis produces from the start a mixed, or at least a potentially mixed, deafness, the conductive element of which is predominant in the early stages, the perceptive element becoming more and more important as the disease advances.

(Author's Summary.)

Endolymphatic Hydrops without Vertigo: Its Differential Diagnosis, and Treatment. HENRY L. WILLIAMS, BAYARD T. HORTON, and LOIS A. DAY, Rochester, Minn. *Archives of Otolaryngology*, 1950, li, 557.

The criteria finally established for a tentative diagnosis of endolymphatic hydrops, which were used also in selecting patients for treatment, were as follows: (1) Patients who had inner-ear deafness with a tendency toward greater loss of hearing for low tones than for high tones were considered to have this condition. This tendency often was more apparent on the bone conduction curve than on the air conduction curve of the audiogram. (2) A history of considerable variability of the degree of deafness was another criterion. In women increased deafness before, during and shortly after the menstrual period was considered significant. (3) A history of vasomotor rhinitis, urticaria, dermatitis factitia or severe unilateral headache, often associated with increased deafness, was felt to suggest that the deafness might be due to endolymphatic hydrops. (4) A sudden decrease of ability to hear, occurring in a period of two to three days, followed by persistence of the hearing loss was thought to indicate the possibility that the disorder was due to endolymphatic hydrops.

Since Horton had found that the highest percentage of improvement in patients having the triad of symptoms described by Ménière was obtained by daily intravenous administration of a solution of histamine phosphate, it was decided to try this method of treatment on certain patients presenting the findings of inner-ear deafness whose deafness might depend on endolymphatic hydrops without vertigo rather than on degeneration of the cells of the organ of Corti, their neuraxons or their central connections. The method of treatment is described and results in 32 cases are reported (11 good, 8 fair, 13 non-beneficial).

R. B. LUMSDEN.

Nose

The Management of Tinnitus. VICTOR GOODHILL, Los Angeles. *Laryngoscope,* 1950, lx, 442.

The successful management of the patient with tinnitus depends upon the establishment of an ætiologic diagnosis and in the assessment of the psychosomatic weighting factor. This should make it possible to attain the final desired goal, namely, the conversion of an uncompensated tinnitus into a psychologically compensated tinnitus. Any management of the patient with tinnitus which does not take into consideration these two aspects will usually be ineffective. Any management which is based upon a single panacea for the treatment of a symptom and not a disease will result in failure. (Author's Summary.)

On Subjective Noise in Labyrinthectomy Patients. F. NEUBERGER. *Monatsschrift für Ohrenheilkunde,* 1950, lxxxiv, 100.

Subjective noises can be caused by stimulation of the sensory cells in Corti's organ and labyrinth, or by irritation of the spiral ganglion, VIIIth nerve filaments or acoustic nucleus. This paper is based on the study of 95 labyrinthectomies carried out in the period 1932-42. The Neumann method was employed. The ears operated upon were deaf, and with labyrinths which were unresponsive to stimulation. Of the 95, 39 had no pre-operative tinnitus. Therefore, about 64 per cent. of all the suppurative labyrinthitis cases suffered from tinnitus. With one exception, the subjective noise vanished after the labyrinthectomy.

Pre-operative tinnitus in a deaf ear with a " dead " labyrinth ceases when the labyrinth is ablated. This suggests that in the course of an inflammatory process in the middle or inner ear, subjective noise is caused by irritation of the sense organ in the cochlea. According to Gradenigo, tinnitus is absent in severe disease when the sense organ undergoes rapid necrosis. In slower processes the sensory epithelium is only partially destroyed. Alongside functionless cells will be some which, while failing to react to acoustic stimuli, are nevertheless capable of giving rise to subjective noise when irritated by the disease. This is confirmed by the fact that after labyrinthectomy, tinnitus continues for a short time and then ceases.

D. BROWN KELLY.

NOSE

Dental Injuries following Radical Surgery on the Maxillary Sinus. GUNNAR MARTENSSON. *Acta Oto-Laryngologica,* 1950, Supplementum lxxxiv.

This monograph of 70 pages deals with the injuries to teeth and subjective changes in sensation of the teeth after antrum operations in 247 cases. This includes 87 cases tested before and after Caldwell-Luc operation, 122 cases followed up after Caldwell-Luc operation up to 10 years since the operation, and 48 cases of intranasal antrostomy.

In almost all cases after Caldwell-Luc operation there is anæsthesia in some teeth. In the majority of cases this anæsthesia is temporary, but in some cases

it is permanent. An important point is that permanently anæsthetic teeth are not necessarily dead teeth, and many have normal blood supply in spite of the anæsthesia. When the teeth are killed by the operation it is nearly always due to direct damage to the apex of the tooth during the operation, and if the roots are carefully avoided by making the opening into the antrum sufficiently high, it is extremely unlikely that the tooth will be killed, even though there may still be permanent anæsthesia. It seems unlikely that removal of the mucosa from the antrum damages teeth, unless this removal is very roughly carried out. A full biography is given and the literature is reviewed.

G. H. BATEMAN.

The Management of Malignancy of the Maxillary Sinus. ARNOLD A. GROSSMAN, Montreal, W. ALLAN DONNELLY, Hartford, Conn., and MAURICE F. SNITMAN, Chicago, Ill. *Canadian Medical Association Journal*, 1950, lxii, 576.

The authors record their experiences and conclusions in a group of ten patients with malignant disease of the maxillary sinus. Unilateral nasal discharge, bleeding, neuralgia, anæsthesia, paræsthesia, pains referred to the temporo-mandibular joint and frontal headache were all fairly common symptoms. The most constant complaint was of unilateral persistent nasal obstruction. Four separate groups of symptom-complexes were distinguished: (1) *Nasal symptoms*, such as unilateral polyps, nasal discharge, obstruction and hæmorrhage. (2) *Buccal symptoms*, such as dental pain and gingival ulcers. (3) *Facial symptoms*, such as swelling over the cheek or in the region of the malar bone, and (4) *Orbital symptoms*, such as excessive unilateral lacrimation. It is suggested that a more exact clinical description of these tumours might be obtained by the employment of such terms as " nasal-buccal carcinoma of the right maxillary sinus " or " buccal-facial-orbital involvement of the right antrum " and so on. Seven of these patients were placed in the nasal group, five in the buccal, five in the facial and four in the orbital. Special emphasis is laid on the desirability of a proper interpretation of early symptoms, such as dental pain, neuralgias of the facial area, insidious unilateral nasal bleeding and persistent unilateral nasal discharge and obstruction. All of these should be considered as indicative of malignancy until proved otherwise. Ohngren's " malignancy line " was of great value in assessing prognosis, for the extension of neoplasms from the superior aspect differed radically from those in the inferior area. The former usually metastasized rapidly by direct extension to the cribriform plate and through it to the frontal lobe; the latter frequently spread to the cervical lymph nodes, and then comparatively late in the disease. A preliminary external carotid ligation was followed immediately by exposure of the sinus by the sublabial route. The neoplasm was then removed or destroyed as completely as possible by electro-surgery and electro-fulguration. A large portion of the palatine process of the involved maxilla was then removed, to provide wide exposure of the antrum. Radium or radon locally or external irradiation by X-rays was usually employed after the operation. A combination of all methods of treatment was essential, and residual or

recurrent growth must be treated vigorously. No attempt has been made to assess the results of this series in terms of a five-year cure-rate. One case report is presented in detail.

J. CHALMERS BALLANTYNE.

LARYNX

The Respiratory Function in Laryngectomized Patients. RUTGER HEYDEN. *Acta Oto-Laryngologica*, 1950, Supplementum lxxxv.

This monograph of about 70 pages deals with respiratory function in 74 laryngectomized patients. The absence of the larynx seems to make very little difference to the incidence of respiratory infections, or to the ability of these elderly patients to do work after operation. The only real disability encountered in this series was that the patients are unable to do heavy outdoor work in very cold weather, as their respiratory tract is unable to tolerate the large volume of cold air needed under these circumstances.

G. H. BATEMAN.

ŒSOPHAGUS

Œsophageal Hiatal Hernia. THOMAS A. SHALLOW, F. JOHNSON PUTNEY, and KENNETH E. FRY, Philadelphia. *Journal Amer. Med. Assoc.*, 1950, cxliii, 169.

This article is based on a study of 110 patients with œsophageal hiatal hernia. This lesion is encountered primarily in middle and later life. Errors in diagnosis are common but œsophageal hiatal hernia should be suspected where there is difficulty in swallowing both liquids and solids, pain and regurgitation of food. Both roentgenography and œsophagoscopy should be used, since one supplements the other. Œsophagoscopy is superior in determining the presence of ulceration. Sixty-nine per cent. of patients were treated by conservative medical treatment and 31 per cent. required surgical intervention. The article has 4 tables.

ANGUS A. CAMPBELL.

MISCELLANEOUS

Para-aminosalicylic Acid with Streptomycin in Tuberculosis. W. ANDERSON, M. G. W. JANSEN and C. A. WICKS, Weston, Ont. *Canadian Medical Association Journal*, 1950, lxii, 231.

This is a preliminary report on the clinical and laboratory findings at the Toronto General Hospital for Tuberculosis, Weston, in a group of patients receiving para-aminosalicylic acid (P.A.S.) orally and streptomycin intramuscularly for pulmonary tuberculosis. In this report, all patients receiving "combined" therapy were given 10 gm. of P.A.S. daily by mouth (or its equivalent as the sodium salt), in addition to 1 gm. of streptomycin daily by intramuscular injection in two equally-divided doses. Originally the authors desired to determine whether the concurrent administration of P.A.S. enhanced the clinical results obtained from the use of streptomycin alone. Alternate

patients with exudative tuberculosis considered suitable for treatment with streptomycin were also given P.A.S. The streptomycin-sensitivity of the tubercle bacilli recovered from those patients who received "combined" therapy was also studied, a number of patients with chronic fibro-caseous tuberculosis being used to provide sources of sputum from which tubercle bacilli could be isolated during and after treatment. The clinical responses of 34 patients with active pulmonary tuberculosis treated by sanatorium routine, streptomycin and P.A.S. were compared with the clinical responses of a similar number and type of patients treated by sanatorium routine and streptomycin for similar periods. When the summations of clinical responses among the two groups were compared, there appeared to be a slightly greater therapeutic response in the groups receiving "combined" treatment, but this difference was neither marked nor constant. In 19 cases on "combined" therapy from which tubercle bacilli could be isolated before and after treatment, the incidence of "completely resistant" variants was seen to be markedly delayed when compared with patients receiving streptomycin alone.

J. CHALMERS BALLANTYNE.

Pathologico-Anatomical Investigations on Sulphonamide-Treated Otogenous Meningitis. F. KREJCI. *Monatsschrift für Ohrenheilkunde,* 1950, lxxxiv, 95.

This paper stresses the value of quantitative protein estimation of the cerebrospinal fluid in meningitis cases treated with sulphonamide. It has been shown that the sulpha drugs, especially in diplococcal infections, increase the amount of sero-fibrinous exudate. This results in a prolongation of the course of the meningitis, mainly due to the fibrinous encapsulation of purulent foci which do not resolve. Both small and extensive multiple subarachnoid abscesses and cisternal empyemata were observed. The differential diagnosis between one of these abscesses and a primary focus is determined by examination of the cerebrospinal fluid. A rise in protein content associated with a stationary or diminishing cell count suggests an encapsulated collection of pus.

D. BROWN KELLY.

Tobacco Smoking as a possible Ætiologic Factor in Bronchiogenic Carcinoma: A Study of 684 Proved Cases. ERNEST L. WYNDER and EVARTS A. GRAHAM, St. Louis. *Journal Amer. Med. Assoc.,* 1950, cxliii, 329.

There is a general agreement that this disease has greatly increased in the last half century. Excessive and prolonged use of tobacco seems to be an important factor in this increase. Among 605 men with bronchiogenic carcinoma other than adenocarcinoma, 96 per cent. were moderately heavy to chain smokers, as compared with 73·7 per cent. among the general male hospital population without cancer. Among the cancer group 51 per cent. were chain smokers compared with 19 per cent. in the general hospital group without cancer. The occurrence of cancer of the lung in a male non-smoker is a rare phenomenon, 2 per cent. Tobacco seems to play a similar but somewhat less evident role in the induction of epidermoid or undifferentiated

carcinoma in women. Ninety-six per cent. of patients with this disease had history of smoking for over 20 years. There may be a lag period of ten years or more between the cessation of smoking and the occurrence of cancer. Ninety-four per cent. of the male patients were found to be cigarette smokers, 4 per cent. pipe smokers, and 3 per cent. cigar smokers. The influence of tobacco on adenocarcinoma seems much less than on the other types of bronchiogenic carcinoma. The article has 6 figures, 5 tables and a bibliography.

ANGUS A. CAMPBELL.

Cancer and Tobacco Smoking: A Preliminary Report. MORTON L. LEVIN, HYMAN GOLDSTEIN, and PAUL R. GERHARDT, Albany, N.Y. *Journal Amer. Med. Assoc.*, 1950, cxliii, 337.

This report is based on the study of 1,045 male cancer patients and 605 male non-cancer patients. Over 80 per cent. of all patients were smokers. There were more than twice as many cases of lung cancer among cigarette smokers as in any other group. Pipe smokers and cigar smokers had no more cancer of the lung than did non-smokers. Lip cancer was significantly increased among pipe smokers but not among cigarette smokers. Cases of lip cancer were increased also among cigar smokers. The article has five tables and a bibliography.

ANGUS A. CAMPBELL.

Antihistaminic Drugs for Colds: Evaluation based on a Controlled Study. LIEUTENANT-COLONEL R. J. HOAGLAND, CAPTAIN E. N. DIETZ, LIEUTENANT P. W. MYERS, and LIEUTENANT H. C. COSAND, Medical Corps United States Army, West Point, N.Y. *Journal Amer. Med. Assoc.*, 1950, cxliii, 157.

This study was confined to 190 healthy young men on military service. They were divided into two groups. Alternate patients in the first group received pyribenzamine orally and placebos. Similarly in the second group half received the drug in solution in a plastic nebulizer and the other half placebos. Unavoidably, diagnosis and results of treatment had to depend largely on statements by patients. Patients receiving placebos fared at least as well as those receiving the drug, either by tablet or nebulizer. The article has one table, two figures and a bibliography.

ANGUS A. CAMPBELL.

Antihistaminic Agents and Ascorbic Acid in the Early Treatment of the Common Cold. DONALD W. COWAN and HAROLD S. DIEHL, Minneapolis. *Journal Amer. Med. Assoc.*, 1950, cxliii, 421.

The authors conducted a controlled experiment on 980 colds treated in 367 supposedly non-allergic students. The students started medication at the earliest symptoms. From these studies the authors conclude that there is no indication that ascorbic acid alone, thephorin alone, ascorbic acid *plus*

pyribenzamine have any important effect on the duration and severity of these infections of the upper respiratory tract. The article has two figures, two tables and a bibliography.

ANGUS A. CAMPBELL.

Histological Reactions to Injections of Procaine Penicillin in Oil. PETER STORY, London. *British Medical Journal*, 1950, i, 1467.

This paper gives an account of the histological changes occurring in the deltoid muscles and adjacent lymph nodes of a patient who had received intramuscular injections of procaine penicillin in arachis oil. The oil occurred in small cysts surrounded by a cellular reaction in which eosinophils were conspicuous. Some muscle degeneration and œdema were present. Fat-bearing phagocytes were plentiful around the oil and in adjacent lymph nodes. The eosinophil reaction may have arisen in response to the arachis oil, though this has not been reported in experiments on rats or rabbits. On the other hand, penicillin is a known cause of eosinophilia and is perhaps a more likely cause for the eosinophils in this case. Allergy to procaine has been described previously, but there is no record of procaine causing an eosinophilia.

R. SCOTT STEVENSON.

Secondary Bronchial Carcinoma simulating a Strangulated Femoral Hernia. E. WILSON HALL, A. GEOFFREY SHERA and E. OWEN FOX, Eastbourne. *British Medical Journal*, 1950, i, 1469.

It is well recognized that bronchial carcinoma is a most protean tumour, perhaps the most protean of all in respect of its metastases, which are not infrequently the first manifestation of the disease. The authors record the case of a married woman, aged 76, who was admitted to hospital as a case of femoral hernia, with a large reddish lump in the left femoral region, very tense and irreducible, but with no history of vomiting. At operation a degenerating glandular mass was removed, and the pathologist reported this to be a lymph gland heavily invaded by a bronchial carcinoma of grade 4 malignancy (Broders's classification). X-ray revealed uniformly increased density in the right lower lobe consistent with a localized area of atelectasis and probable bronchial carcinoma. The patient died one month after admission to hospital and at *post-mortem* examination an oat-cell carcinoma of the right lower lobe was found apparently arising from one and a half inches below the bifurcation of the right main bronchus.

R. SCOTT STEVENSON.

The New Oto-Laryngological Department of the University Hospital, Upsala, Sweden. C. O. NYLEN. *Acta Oto-laryngologica*, 1950, Supplementum lxxxvii.

This supplement gives many interesting facts and figures on the cost and layout of a new oto-laryngological department opened in Upsala in 1950. In a supplement (lxvii) published in 1948 Professor Nylen showed the plans for the

department and the present paper shows photographs and describes the finished department. These two papers are of great interest to anyone taking an active part in planning or modifying an ear, nose and throat department.

G. H. BATEMAN.

Aerosol Therapy for Lung Disease. H. K. CHRISTIE, M. ARONOVITCH and J. F. MEAKINS, Montreal. *Canadian Medical Association Journal*, 1950, lxii, 478.

This is a study of eight consecutive cases of acute non-tuberculous lung abscess treated by aerosol therapy at the Royal Victoria Hospital, Montreal, during the year 1947-48. All cases received intramuscular penicillin in an average dosage of 45,000 units three-hourly and all received aerosol penicillin. This was administered in 1 c.c. doses five times a day, each c.c. containing an average of 40,000 units of penicillin. In one case the penicillin was dissolved in normal saline solution, in the remaining seven in a normal saline solution of epinephrine 1 per cent. and ephedrine 1 per cent. The application by aerosol of these broncho-dilator and vaso-constrictor drugs direct to the affected areas was thought to relieve the œdema and obstruction and to allow the patients to cough more easily and to expectorate retained secretions with less effort. It also permitted the aerosol penicillin to be more effectively applied topically to the diseased site. The average duration of aerosol therapy was 25 days. Expectorant mixtures, postural drainage and encouragement to cough were used routinely. The results were excellent in all cases. Radiographic resolution occurred in an average of five or six weeks. The total duration of the illness, including convalescence, averaged fifteen weeks.

J. CHALMERS BALLANTYNE.