ABSTRACTS

EAR

Appraisal of Fenestration Operation. KENNETH M. DAY (Pittsburgh). *Arch. of Otolaryng.*, 1945, xliv, 5, 547-559.

The author reports his complete series of 100 cases operated on during a period of six years up to December, 1945. Successful results were obtained in eighty cases. Nearly every failure is attributed to faulty selection, to technical faults connected with the operation and post-operative care, or to post-operative complications.

The fenestra closed in two of the first ten cases, in seven of the next forty, and in but one case in the last fifty. There have been six revisions, three of which were successful.

The author concludes that the operation is a gamble at best and one cannot predict when it will prove to be a failure. However, with improved technique, experience and understanding, the percentage of failures has decreased from year to year. The successful restoration of practical speech hearing can definitely be attained in properly selected patients, and maintained over a period of years.

This is a well-balanced appraisal, to which it is not possible to do full justice here, but which merits study.

R. B. LUMSDEN.

Effect of Obliteration of the Endolymphatic Sac and Duct in the Monkey. J. R. LINDSAY (Chicago). *Arch. of Otolaryng.*, 1947, xlv, 1, 1-13.

In the seven monkey ears in which it was attempted to destroy the endolymphatic sac and duct without damaging other labyrinthine structures the following results were accomplished : in three ears not more than exposure and possibly simple drainage had been accomplished. In one the sac and the major portion of the medial dilatation, sinus II, were destroyed. In one there was complete destruction of the sac and sinus II, plus accidental opening of the posterior semicircular canal. In two the sac and sinus II were completely destroyed without operative injury of other labyrinthine structures.

None of the animals was observed to have any gross disturbance of equilibrium on the day following operation or afterwards. No nystagmus was observed after the animals were completely out from under the anæsthetic. Pressure exerted in the cavities over a temporary pack at operation in some of the ears produced no conjugate deviation of the eyes such as occurs routinely when a fenestra is made in a semicircular canal without injuring the membranous canal. The animals were killed from two to three and a half months after the operation, and perfused.

The extent of the operative lesion was determined by histological examination. No infections were found in the middle ear, the mastoid process or the

labyrinth. Osteogenesis had progressed to varying degrees in the callus filling the operative defect. The membranous structures were well preserved. In all the ears the cochlear duct, the saccule, the utricle and the membranous canals showed no abnormality of contour that could not be explained as post-mortem artefact, with the exception of one ear in which the posterior canal was injured at operation.

The sensory apparatus and neural elements appeared normal in all except the single ear in which the otolithic membrane was elevated from the saccular macula. The stria vascularis appeared normal in all ears as did also the cells of Hensen and Claudius.

These experiments demonstrate that in the monkey's ear the maintenance of a normal quantity of endolymph is not dependent on the existence of the endolymphatic sac or the more differentiated medial dilated portion of the duct.

The fact that obliteration of the endolymphatic duct to this extent did not appreciably affect the volume of endolymph in the remainder of the system in periods of three and a half months, rules out the hypothesis that hydrops of the labyrinth can be attributed to impairment of function of this structure.

R. B. LUMSDEN.

Histologic Observations on the Healing of Labyrinthine Fistulas in Monkeys. J. R. LINDSAY (Chicago). *Arch. of Otolaryng.*, 1946, xliii, 1, 37-48.

This report comprises preliminary observations on a small series of monkeys' ears and a second series of 48 ears operated on over a two year period up to the beginning of 1944.

In the Summary, the author states that the results available from the first half of this series of fenestration operations seem to warrant the following interpretations regarding the regeneration of bone at the fistula :—

(1) The fistula in the bony semicircular canal always closes by formation of new bone unless certain measures are carried out.

(2) The regeneration of bone occurs rapidly from the periosteal layer and more slowly from the endosteal surface of the capsule. Complete closure may occur from either or both layers.

Attempts to prevent regeneration of periosteal bone have resulted as follows :—

(1) The use of a cutaneous flap reflected from the posterior wall of the external auditory meatus without removal of the annulus tympanicus was not successful. The situation of the fistula in a concavity tends to prevent close contact with the covering flap throughout the healing period.

(2) Thiersch grafts of hair-bearing skin were frequently successful in preventing closure for several months but proved to be unsatisfactory because of occasional degeneration and because of the presence of hair fragments beneath the graft, which stimulated formation of callus and eventual closure.

(3) Conjunctival grafts were used with sufficient degree of success to warrant further laboratory investigation.

(4) The use of a tympanomeatal flap according to the Lempert technic has given the best results as indicated by the response to the test for fistula.

A factor predisposing to success in the application of any covering graft or flap is the locating of the fistula on a convex surface rather than in a localized concavity.

The evidence suggests that any fistula remains open only by virtue of the union which occurs between the membranous labyrinth and the covering flap to the exclusion of osteogenic tissue.

The article contains eight figures of microscopic sections.

R. B. LUMSDEN.

Tympanosympathectomy : A Surgical Technic for the Relief of Tinnitus Aurium. JULIUS LEMPERT (New York). *Arch. of Otolaryng.*, 1946, xliii, 3, 199-212.

As a result of extensive research, a new theory is offered, suggesting that tinnitus aurium in many cases and under certain conditions may be due to a tonus impulse transmitted to the inner ear by diseased sympathetic ganglion cells of the tympanic plexus. Based on this new theory, tympanosympathectomy is recommended for the relief of tinnitus aurium.

The surgical technic by which tympanosympathectomy may be performed without disturbing the hearing acuity has been successfully employed.

Of fifteen patients on whom this operation was performed, ten are completely free of tinnitus.

The article contains ten figures.

R. B. LUMSDEN.

Ménière's Syndrome : The Basic Fault ? MILES ATKINSON (New York). *Arch. of Otolaryng.*, 1946, xliv, 4, 385-391.

In a concise contribution, the author reviews the histological evidence and the evidence of clinical experiment.

He concludes that the case for dysfunction of the capillaries as the basic fault which produces the disturbance of labyrinthine function which leads to attacks is a strong one. An undue permeability of the capillaries explains the histological picture. Infection, allergy and avitaminosis-C are primary disturbances of function of the capillaries. So also is sensitivity to histamine, which is probably related to demonstrable protein sensitivity. Vasospasm produces secondarily the same effect on the capillary walls by interfering with their nutrition. The methods of treatment by reduction of water intake and sodium intake or by increase of potassium intake owe their beneficial effect to diminishing the amount of fluid available to seep through the abnormally permeable capillary walls. Treatment by histamine or nicotinic acid in the appropriate groups is more fundamental, since it seeks to overcome the factor which is damaging the capillary wall. The one tries to limit the leak from the reservoir by diminishing the head of water ; the other attempts to repair the walls.

If this thesis is accepted, the major difficulty of Ménière's disease is resolved. It is in actual fact not a disease *per se* but a syndrome. It is the syndrome of the labyrinth in paroxysmal form and can be produced by any factor which, by increasing the permeability of the capillaries forming the stria vascularis, increases the production of endolymph, thus raising intralabyrinthine pressure. Satisfactory treatment depends, therefore, on determining what that factor is and eliminating it. This is not always easy, but it becomes less difficult when the various possible factors are appreciated.

R. B. LUMSDEN.

Ear

Correlations of Hearing Tests. MAJOR BARNARD C. TROWBRIDGE. *Arch. of Otolaryng.*, 1947, xlv, 3, 319-334.

The analysis is based on the examination of 24,740 patients, of whom 1,184 were tested by the individual audiometric method.

The author concludes that comparative studies of the commonly used hearing tests and the correlations of their results indicate that one is not justified in drawing precise conclusions as to hearing efficiency from these methods as they are now employed. The good hearing required in modern warfare and modern industry is submerged in an environment of noise and vibration. Normal hearing acuity alone is not sufficient in the evaluation of hearing function. The acceptable applicant, military or industrial, should be able to interpret signals, communicative ideas and orders correctly and to distinguish every change of pitch and of character of sound in an environment of noise and vibration.

The hearing tests as commonly used do not detect the unstable and susceptible hearing mechanism. It is commonly known, although frequently disregarded in the interpretation of test results, that normal hearing acuity does not necessarily indicate a normal and stable hearing mechanism. It is, therefore of profound importance to test the hearing function as to the rate of fatigue, the effect of fatigue on hearing acuity, the threshold of the excitation of tinnitus and the presence of discrete high tone defects.

The whispered voice test as a regulation test for the hearing of those entering military service should be supplemented by pure tone audiometry. Pure tone audiometry should be a requisite in the selection of all applicants, military or industrial, who will be exposed to a background of noise. The testing of hearing acuity by controlled articulation (speech) tests received against a background of measured noise would seem to give an additional practical evaluation of hearing acuity and efficiency.

R. B. LUMSDEN.

Indications for the Fenestration Operation. HOWARD P. HOUSE (Los Angeles). *Arch. of Otolaryng.*, 1947, xlv, 3, 312-318.

Candidates for the fenestration operation may be classified as ideal, borderline and unsuitable, depending on the amount of nerve function present in the speech frequencies.

Indications: ideal candidates—the 1024 tuning fork is heard 10 seconds or more longer by bone conduction than by air conduction; the nerve loss by audiometry is 10 decibels or less for the speech frequencies. Borderline candidates—the 1024 fork is heard 5 to 10 seconds longer by B.C. than by A.C.; the nerve loss by audiometry does not exceed 20db. for two speech frequencies and is not more than 30db. for the remaining 2048 frequency. Candidates not suitable—the 1024 fork is heard longer by A.C. than by B.C.; the nerve loss by audiometry is more than 20 db. for two speech frequencies or more than 30 db. for the remaining 2048 frequency.

Using these indications, the writer has performed 250 fenestration operations by the Lempert technique. 111 have been observed for more than six post-operative months. There were no serious complications.

79 per cent. of the ideal candidates and 55 per cent. of the borderline candidates, giving an average of 66 per cent., have maintained practical,

serviceable hearing over six months. 84 per cent. of the candidates operated on, have maintained audiometric improvement over six months.

R. B. LUMSDEN.

Friedlaender's Bacillus Meningitis Secondary to Otitis Media: A Report of a Case with Recovery and a Review of the Literature. ALEXANDER D. GHISELIN (New York) and LIEUT. ROBERT B. ROBERTSON. *Archives of Otolaryngology*, 1947, xlv, 4, 432-445.

Fourteen cases of otogenous Friedlaender's bacillus meningitis are presented, collected from all the available literature; two of the patients recovered, one being the authors'. In all cases the picture was similar.

The bacillus is Gram-negative, immunologically related to Pneumococcus II and the bacillus of rhinoscleroma and is often confused with the B. coli-B. ærogenes group. It is a pathogen associated with extensive suppurations of the body. A relationship appears to exist between infections with Friedlaender's bacillus and diabetes mellitus.

It is a rare cause of otitis media and the clinical and pathological picture is very similar to that of typical Pneumococcus III otitis. Complications are frequent. Of these, meningitis is one of the most common.

No dependable therapeutic measure has been found, but some assuring results have been noted with sulphadiazine. Streptomycin may prove effective against this organism in the future. In view of the usually insidious course an early extensive mastoidectomy seems to be the most important therapeutic feature.

The article contains 43 references.

R. B. LUMSDEN.

Pressure Treatment of Allergic Sinusitis. J. MATHEWS ROBISON (Houston, Texas). *Archives of Otolaryngology*, 1947, xlv, 4, 405-430.

The absorption of extravascular fluid from the mucosa of the paranasal sinuses is related to the tissue pressure which, according to its magnitude, retards capillary filtration and promotes capillary absorption, molecular diffusion and lymph flow. Stagnation of tissue fluid in the sinus mucosa is part of the pathogenesis of subacute and chronic allergic sinusitis. Intermittent attacks of infection are characteristic of the clinical course of the stagnation of tissue fluid in the mucosa and participate in the causation of the progressive degeneration which occurs in the mucosa.

Increasing the tissue pressure of the mucosa of the maxillary sinus by application of local pressure to the mucosa by means of a balloon filled with iodized oil accelerates absorption of stagnant tissue fluid and is an important aid in decreasing the incidence of recurrent sinus infection. This procedure stops, interrupts or retards the progress of the pathological processes in the sinus mucosa.

The symptoms occurring during allergic sinusitis apparently are related to the amount and character of the toxic products present in the tissue fluid of the sinus mucosa and are not directly proportional to the volume of the excess fluid. The application of local pressure to the mucosa of the maxillary sinus relieves certain patients of the symptoms which they manifest during recurrent

sinus infection. Patients have been relieved of nasal obstruction due to increased turgescence of the turbinates, recurrence of nasal polypi, excessive secretion of the maxillary sinuses and the bronchopulmonary symptoms of bronchitis, cough and infectious asthma. The duration of this relief is not known, but so far it has continued until the patient is attacked again by an allergic or an infectious agent. Since allergic sinusitis is characterized by progressive pathological changes which may be present over a protracted period it is difficult to evaluate properly and often erroneous to judge the ultimate efficiency of any type of therapy administered and observed over a short span of the patient's lifetime.

The difficulties encountered during the application of local pressure to the mucosa of the maxillary sinus may be ascribed to : temperament of the patient, application of excessive pressure, infection and closure of the antrostomy opening, herniation of the balloon into the nose, nasal obstruction due to swelling of the turbinates and fibrosis of the mucosa.

The application of local pressure to the mucosa of the maxillary sinus should be considered as an adjunct to more conservative treatment of allergic sinusitis and not as a substitute for any standard practice.

There are fifteen figures, which include drawings, photomicrographs and X-rays.

R. B. LUMSDEN.

Otic Complications of Streptomycin Therapy: A Preliminary Report. EDMUND P. FOWLER, M.D., and EWING SELIGMAN, M.D. (New York). *Jour. A.M.A.*, 1947, cxxxiii, 2, 87.

Eighty-one streptomycin patients were examined for evidence of aural toxicity. These were all healthy adults and had no history of deafness prior to their present illness. Only fifteen of these cases in this series were examined both before and after streptomycin therapy.

From this study, it is evident that a high incidence of vestibular disturbance and a sizable number of cases of deafness, either transitory or permanent follows the use of streptomycin. As a rule, the onset of otic symptoms occurs between the seventeenth and twentieth days. Fortunately, patients recover from the deafness or dizziness in the majority of cases.

The occurrence of otic symptoms during streptomycin therapy should call for a reconsideration of the case before continuing the use of the drug. If, however, the drug is indicated, another manufacturer's lot number should be tried.

An audiogram and vestibular test should be performed before beginning streptomycin therapy.

The article has four tables and a bibliography.

ANGUS A. CAMPBELL.

On a Case of Otogenous Sinus Thrombosis with Thrombosis of the Facial Veins. N. HIBLER (Vienna). *Monatsschrift für Ohrenheilkunde*, 1947, lxxxi, 32.

Thrombosis of the facial veins as a complication of otogenous sinus thrombosis is very rare, only two cases being mentioned in the literature. The present case concerns an 18 year old patient who underwent radical mastoidectomy with ligature of jugular and facial veins for lateral sinus thrombosis. After the

operation, considerable swelling of the face and eye-lids on the affected side was followed by the formation of abscesses along the course of the anterior facial vein. The ligated stump of the facial vein was found to contain pus, and in order to prevent a cavernous sinus thrombosis, the angular vein was also tied and divided. Despite the added complication of septic endo- and pericarditis, the patient recovered.

H. D. BROWN KELLY.

On the Course of Labyrinthitis in X-ray Pictures. O. NOVOTNY. *Monatsschrift für Ohrenheilkunde,* 1947, lxxxi, 81.

One form of labyrinthitis is that which passes over into a latent stage with loss of function. The progress of the disease cannot usually be established owing to the absence of clinical signs and symptoms. In such cases radiograms can help, because they demonstrate the actual alterations in the structure of the labyrinth.

These alterations usually occur in connection with chronic or sub-acute (mucosus) otitis media, where the invasion of the inner ear is through the semicircular canal. They consist in a radiologically demonstrable widening of the inner-ear cavities followed later by a narrowing and complete obliteration of details. The widening can be demonstrated as early as two weeks after destruction. The narrowing appears after eight months.

Histologically, the widening is due to destruction of the bony labyrinth by osteoclasts, while the endosteum remains preserved for a long time. New bone formation also takes place, which first fills the semicircular canals and then narrows the vestibule.

X-ray appearances may indicate labyrinthectomy if there is progressive widening of the cavities, or a stationary enlargement of the cavities with the appearance of meningeal irritation.

DEREK BROWN KELLY.

Investigations on the Pneumatization of the Temporal Bone after Mastoidectomy in Early Childhood. E. RUCKENSTEINER and F. R. PRIETZEL. *Monatsschrift für Ohrenheilkunde,* 1947, lxxxi, 73.

Following antrotomy in the first Wittmaack developmental period (14 cases, ages 5-12 months), good pneumatization of the mastoid process is more frequent than restricted cell formation. In the second developmental period (20 cases, ages 1½-4 years), the same operation on a cellular process may cause a regression to the less cellular type. The influence of the operation in the first period cannot be assessed by comparing the operated with the non-operated or sound side, since there was a preponderation of cases with equally well pneumatized processes.

It appears that a suppurative otitis media and mastoidectomy in the first period does not impair pneumatization. In the second period, however, the inflammation and operation have an inhibitory action on cell formation. This may be due to the fact that at that age the process of cell development is at its most active, and easily influenced by unfavourable factors.

DEREK BROWN KELLY.

Nose

On the Origin of New Bone Formation in the Scala Tympani of the Basal Coil of the Cochlea in Otosclerosis. O. MAYER. *Monatsschrift für Ohrenheilkunde*, 1947, lxxxi, 113.

The author discusses the enigmatical fashion in which new bone forms in the scala tympani of the cochlea in otosclerosis. This formation has been described by Nager and Fraser. It is assumed to take the form of a bony strut or girder to prevent the window region of the labyrinth from collapsing under the influence of internal stresses. The presence of fissures and lines of bone laid down in a network formation is demonstrated. A section taken parallel to the posterior surface of the pyramid shows such a fissure, and bone regeneration similar to callus formation in the scala tympani.

DEREK BROWN KELLY.

Surgical Opening of the Tip of the Pyramid, completely avoiding the Middle Ear. N. HIBLER. *Monatsschrift für Ohrenheilkunde*, 1947, lxxxi, 134.

An operative method is described by which the petrous pyramid is opened from above, avoiding the middle ear and attic. The operation is based on Streit's procedure, and consists in removing a portion of the squama of the temporal bone, and part of the zygoma. The dura is elevated from the anterior surface of the pyramid with some loss of cerebrospinal fluid. The next step is rendered easier by skeletonizing the upper vertical semicircular canal. A thin double edged chisel is then passed above the canal to the anterior surface of the pyramid, and the bone removed in fine shavings until pus is reached. A cell formation here makes the process easier, but is not necessary for the success of the operation. The operation is suitable for collections of pus in the neighbourhood of the anterior surface of the pyramid, and good radiograms are necessary for localization. The article is illustrated by three radiograms.

DEREK BROWN KELLY.

Acute and Chronic Scarlatina Otitis. EINO VAHERI. *Acta Otolaryngologica*, 1/2, xxxv, 1/1, April 30th, 1947.

The author records the results of investigation of 2,606 cases of scarlet fever. Suppurative otitis media occurred in 528 patients, i.e., 20·3 per cent. These cases are carefully followed up and investigated and the final state of the middle ear recorded. 9·3 per cent. of the otitis cases required mastoid operations. There is much useful information in this paper and it provides indications for prognosis in this type of otitis media.

G. H. BATEMAN.

NOSE

Modern Treatment of Chronic Sinusitis. LELAND G. HUNNICUTT, M.D. (Pasadena, California). *Jour. A.M.A.*, 1947, cxxxiii, 2, 84.

By this the writer means current treatment, whether it be old or new. The internist can help by eliminating such factors as glandular dyscrasia, dietary deficiencies, intemperance and excessive blowing of the nose.

Nasal medication must not be irritating and the P.H. must be compatible with ciliary action.

Many cases will clear up rapidly if the allergic background be controlled.

Diagnostic washings should always be done in maxillary, sphenoid and if possible frontal sinuses. Local use of some sulfonamide compound or penicillin is of questionable value although the use of penicillin injections before and after radical operation helps to control secondary infection.

Vaccines and roentgenologic treatment have fallen into disrepute.

Septal spurs and polyps should be removed.

Much less surgical treatment is now necessary.

Maxillary sinusitis of dental origin requires a small naso-antral window. In frontal sinusitis it is necessary to create a clean, open middle meatus. External operation is rarely necessary unless there is osteomyelitis.

Infection in the ethmoid sinuses usually clears up well and operation on the sphenoid sinuses is seldom required.

ANGUS A. CAMPBELL.

NASOPHARYNX

Irradiation of Hyperplastic Lymphoid Tissue in the Nasopharynx. SAMUEL J. CROWE, M.D. and EDWARD M. WALZL, M.D. (Baltimore). *Journal A.M.A.*, May 10th, 1947, CXXXIV, 2, 124.

The writer and his associates have been using radiation for the removal of surgically inaccessible lymphoid tissue for the past eighteen years. The dosage is so small that although many thousands of treatments have been given, no burns or serious reactions have been noted.

Two types of applicators have been used, one containing radon gas and the other radium salt. In each case the radioactive material is contained within the tip of a slender rod, 8 or 9 inches long. The metal wall of the applicator acts as a filter. The radium applicator contains 50 mgr. of anhydrous sulphate.

The lymph nodules between the tubal orifice and the posterior end of the middle turbinates are visualized through a nasopharyngoscope. Under local anæsthetic, the applicators are passed along the floor of the nose until the tips are in contact with the nasopharynx. The applicators are left in position for about 8½ minutes on each side and the treatment repeated every ten days for three doses.

The best results were obtained in patients with sufficient obstruction to cause earaches and obvious deafness. Radium treatments have been given to hundreds of children who have not had adenoids removed and the results are as good or better than those of operation alone.

Air Force or submarine personnel, developing ærotitis showed great improvement following radium treatment. Many allergic children with persistent cough or even asthma were benefited by the treatment.

The presence of lymphoid tissue is no indication for treatment if the patient has no symptoms.

ANGUS A. CAMPBELL.

LARYNX

Keratosis of the Larynx. LOUIS H. CLERF, M.D. (Philadelphia). *Jour. A.M.A.*, 1946, CXXXII, 14, 823.

Localized areas of thickening of the epithelium which appears as single or multiple chalky white elevations on the upper surface or edge of one or both

vocal cords are not uncommon. Some laryngologists use the term keratosis, hyperkeratosis, leukoplakia and pachydermia synonymously.

Lesions are more commonly found in adult males who are excessive cigarette smokers. Excessive use of the voice or alcoholism do not appear to be important factors.

The term pre-cancerous has been applied to this type of lesion by many writers and the author feels this has some justification.

It is impossible to prognosticate the outcome in any given case and frequent examination of the larynx is imperative because of rapid recurrence and in some cases changes which suggest malignancy.

Four cases are reported in some detail in which stripping the vocal cords of their mucosal and sub-mucosal coverings was sufficient to bring about a cure. Four other cases are reported which had been under treatment for long periods for keratosis but which ultimately developed carcinoma.

The article is illustrated and has a bibliography.

ANGUS A. CAMPBELL.

Surgical Treatment for Carcinoma of the Larynx. SIMON JESBURG, M.D. (Los Angeles). *Journal A.M.A.*, May 10th, 1947, CXXXIV, 2, 121.

No cancer can be diagnosed without a biopsy. A maligant growth arising from the true vocal cord is almost invariably squamous celled, slow growing, of low grade malignancy and not sensitive to radiation. This type of growth belongs to the domain of surgery.

Elsewhere in the larynx growths are of high grade malignancy and more sensitive to radiation.

The selection of treatment should be under the direction of a laryngologist who is radiologically minded or a radiologist who is trained in laryngology.

A cancer originating in the epiglottis may involve the whole of this structure and yet not extend to the surrounding tissues. Of five such cases four were cured by external subhyoid pharyngotomy.

Laryngofissure with cordectomy should be used if the cord is motile, but when the cord is fixed, the underlying cartilage should also be removed. Cordal cancers approaching the anterior commissure should be treated by removal of the anterior part of the opposite cord with laryngofissure. Cordal cancer which involves the larynx beyond the extent of the true cord requires laryngectomy. If the cancer is extensive or of a high grade malignancy, a preliminary course of irradiation should be done before surgery is attempted.

ANGUS A. CAMPBELL.

Rœntgen Therapy in Cancer of the Larynx. MAURICE LENZ, M.D. (New York). *Journal A.M.A.*, May 10th, 1947, CXXXIV, 2, 117.

Except for some technical improvements, modern roentgen therapy is essentially the same as that employed by Coutard in 1919.

An accurate estimate of the extent of the disease is helpful in guiding the daily dosage and setting up the field for radiation.

Microscopic evidence of retrogressive radiation changes appear about two or three months after X-ray treatment, so that all therapy should be terminated before that time and should not be repeated.

Abstracts

So-called prophylactic post-operative roentgen therapy is questionable. Chondronecrosis is exceptional if treatment has been properly administered.

Sloughs of mucosa and cancer cells may be aspirated and cause broncho-pneumonia or lung abscess.

X-ray treatment causes œdema of the mucosa and may even require a tracheotomy.

Of 110 patients with cancer of the larynx and pharynx, 30 are known to have remained well for five or more years after roentgen therapy. Roentgen therapy is recommended for all cancers of the vocal cords except when the disease has extended subglottically or into the arytenoid cartilage, when laryngectomy is preferable. Roentgen therapy compares favourably with laryngofissure and results in a better voice. Roentgen therapy should be tried in all cases and if it fails, laryngectomy can be done without fear of delayed healing, provided the treatment has been properly administered. For cancer of the epiglottis, ventricular bands and the anterior portion of the aryepiglottic folds, roentgen therapy should be employed even when the arytenoids are fixed and infected lymph nodes are present.

Cancer of the pyriform sinus usually invades the arytenoid cartilages and causes early metastases in the cervical lymph nodes and is rarely cured by roentgen treatment. Movable lymph nodes should be radically resected and if fixed, treated by radium or X-ray.

The article occupies nine columns, has five tables and a bibliography.

ANGUS A. CAMPELL.

Sarcoma of the Larynx. LOUIS H. CLERF (Philadelphia). *Arch. of Otolaryng.*, 1946, xliv, 5, 517-524.

In a review of malignant tumours of the larynx observed at the Jefferson Hospital since 1930, there were 8 cases of sarcoma and 740 cases of carcinoma—a ratio of 1 to 92. All 8 patients were men. Ages varied from 25 to 75 years.

The commonest form is fibro-sarcoma. This tumour is single, often pedunculated, may be nodular, is firm in consistency, usually is not ulcerated and is relatively avascular. It does not metastasize early.

In this series there were 4 cases of fibro-sarcoma. All the tumours were attached to the vocal cord, 2 being pedunculated. There was one case each of fibro-osteosarcoma, chondrosarcoma, lymphosarcoma and extramedullary plasmocytoma.

The symptoms are those common to all laryngeal neoplasms. Appearances are not sufficiently typical to warrant a clinical diagnosis and repeated biopsies may be necessary.

The cases were treated as follows: Chondrosarcoma and fibro-osteo-sarcoma by laryngectomy. In 3, the tumour was removed adequately by thyrotomy. One was treated by removal with a snare. A discrete cord tumour with a small pedicle was removed with a segment of cord by cupped and tissue forceps. The lymphosarcoma was treated by irradiation. A report of the cases is given.

End results: of 6 cases observed more than 5 years ago, 1 died from local recurrence and lung metastasis, 2 died of cardio-vascular disease $5\frac{1}{2}$ and $9\frac{1}{2}$ years after operation, without evidence of recurrence. One died of cerebral hæmorrhage 13 months after operation, with no evidence of recurrence. Two are

living and free from recurrence 5 and 11 years following operation. In 2, the post-operative interval is only 5 months.

The author concludes that fibro-sarcoma should be treated surgically by open operation, without sacrifice of the larynx. Irradiation is the treatment of choice in lymphosarcoma.

R. B. LUMSDEN.

BRONCHI

Surgical Aspects of Bronchogenic Carcinoma. JOHN C. JONES, M.D. (Los Angeles). *Jour. A.M.A.*, 1947, cxxxiv, 2, 113.

The actual incidence of the disease is on the increase. The symptoms are essentially the same as inflammation, such as cough, pain, hæmoptysis, weight loss, wheezing, dyspnœa and clubbing of the fingers and toes. Roentgenography is the greatest single diagnostic aid at our disposal. Bronchoscopy is the next most important, as in over 60 per cent. of cases a biopsy is possible. Bronchoscopy may yield important information such as narrowing and fixation of the bronchi. Operability may be determined by this method of examination.

All cancer of the lung arises in the bronchial mucosa and is of high grade malignancy. Squamous cell carcinoma, adenocarcinoma and undifferentiated cell types are found. The squamous cell tumour occurs more frequently, runs a slower course and the incidence of metastasis is lower.

Roentgen therapy at best offers only palliation. Total pneumonectomy with resection of the regional mediastinal, subcarinal and azygos lymph nodes is the only operation that offers a cure.

In 196 cases seen during the past 4 years, only 39 had pneumonectomy. Of these patients, 2 died in hospital, 11 died later and 26 remain alive but a number of these will probably die of recurrence later.

ANGUS A. CAMPBELL.

ŒSOPHAGUS

Œsophageal Leiomyoma. PAUL W. SCHAFER, M.D., and C. FREDERICK KITTLE, M.D. (Chicago, Illinois). *Jour. A.M.A.*, 1947, cxxxiii, 16, 1,202.

Benign tumours of the œsophagus are rare but have a wide variety. The most frequent type is myoma. The myomas originate in the muscular coats of the œsophagus and are most frequently located in the posterior mediastinal space. Their growth causes few symptoms and those that do result are not pathognomonic. Dysphagia is seldom a symptom.

Stereoroentgenograms of the chest, with appropriate oblique views are the most useful diagnostic procedures.

Œsophagoscopy further aids in their localization and helps to differentiate from the malignancies, particularly when an adequate biopsy can be secured. Bronchoscopy is indicated if the tumour produces displacement of the trachea or bronchi.

A case is reported in detail where the tumour, a myoma, was removed by external operation.

The article is illustrated and has an extensive bibliography.

ANGUS A. CAMPBELL.

Abstracts

Supervoltage Roentgen Therapy of Carcinoma of the Œsophagus. FRANZ BUSCHKE, M.D. and SIMEON T. CANTRILL, M.D. (Seattle). *Journal A.M.A.*, May 10th, 1947, CXXXIV, 2, 127.

The purpose of this paper is only an attempt to overcome the attitude of defeatism which apparently prevails in the medical profession at large.

With 200 kilovolt radiation therapy, in about one half of the early cases of carcinoma of the œsophagus, temporary re-opening of the obstruction lasting from 6 to 18 months can be expected.

Physical measurements demonstrate that sufficient dosage to completely sterilize a tumour cannot reach a growth in the thoracic œsophagus without intolerable damage to surrounding structures if radiation in the medium voltage is used.

Radiation will be tolerated only in patients with incomplete stenosis when feeding is still possible. A patient who needs a gastrostomy will usually be in too poor a condition to support radiation therapy.

Hospitalization is essential for preservation of strength, particularly of fluid and protein intake. Repeated fluoroscopies with careful research for possible ulceration leading to perforation are necessary during the treatment.

Of nineteen patients seen during the past seven years, only six were thought to be suitable for treatment. All of the latter have shown tumour regression with temporary re-opening of the food passage. Two of these have remained well clinically and radiographically for periods of seven and two years respectively. Papillary growths are more favourable than the infiltrating type.

A forced increase in dosage does not improve the results but rather interferes with curability with intolerable bi-effects.

The two patients who have remained well have received fairly low dosage; the one well for seven years receiving the lowest dose in the entire group.

The article has a table and a bibliography.

ANGUS A. CAMPBELL.

1. *Razor Blade in Œsophagus: Transthoracic Removal.* T. HOLMES SELLORS.
2. *Tooth Plate Impacted in Gullet for Fifteen Years: Removal by Transthoracic Œsophagotomy.* G. GREY TURNER.
   Brit. Jour. Surg., 1947, XXXIV, 135.

These two cases of transthoracic œsophagotomy for foreign body, which appear as separate articles but in the same number of the *Journal*, deserve the careful study of any laryngologist who may still hold that every foreign body in this region can be removed *per vias naturales*. Furthermore, the cases illustrate the remarkable tolerance of the œsophagus to the prolonged presence of any intruder.

1. The razor blade was "swallowed" by a child aged 2½ who had been addicted for some months to the unfortunate habit of swallowing buttons, toys, etc. There was no definite history, however and he was admitted to hospital on account of feverish attacks and abdominal discomfort, also difficulty in swallowing solids. X-ray examination showed a razor blade firmly impacted at mid-thoracic level. Transpleural œsophagotomy was successfully performed by Mr. Holmes Sellors, and the child made a gradual recovery which, however,

was complicated by empyema. Needless to add, intensive, penicillin treatment was given.

2. The second case, reported by Professor Grey Turner, is even more remarkable. The patient, a woman aged 52, had a vivid recollection of swallowing a denture 15 years previously, but, strange to say, there was no X-ray or œsophagoscopy. It is also remarkable that she remained well for 10 years. Then there commenced difficulty of swallowing, and abdominal pain. The gall bladder containing stones, was removed, but symptoms persisted. She was admitted to Hammersmith Hospital, where further X-ray examination revealed the denture. Œsophagoscopy showed that the plate, firmly impacted, was lying in an ulcerated area, and it was deemed unwise to attempt removal by this means. A week later the œsophagus was exposed by the transthoracic route, the plate was removed, and recovery was steady. The writer discusses at some length the technique and difficulty of the operation.

DOUGLAS GUTHRIE.

MISCELLANEOUS

A study of the Attitudinal Reflexes of Magnus and de Kleijn in Thalamic Man. HUGH O'NEILL (Santa Ana, California). *Arch. of Otolaryng.*, 1946, xliii, 3, 243-282.

A patient with decerebrate rigidity who recovered was closely watched and studied extensively. The condition involved double cortico-spinal release and bilateral expression of the reflexes of Magnus and de Kleijn.

A review of the literature is followed by the case report which is freely illustrated and must be studied in the original article.

R. B. LUMSDEN.

Pedicled Pericranial Grafts for the repair of Dural Tears in the Anterior Fossa of the Skull. ARTHUR D. ECKER (Syracuse, N.Y.). *Archives of Otolaryngology*, 1947, xlv, 4, 377-384.

There is presented a method of repairing dural tears in the anterior fossa of the skull by the use of pedicled grafts of the frontal pericranium which also seal off the frontal and ethmoidal cells.

R. B. LUMSDEN.

The value of Endotracheal Intubation. RICHARD FOREGGER, M.D. (Milwaukee). *Jour. A.M.A.*, 1947, cxxxiii, 16, 1,200.

The writer feels that in medical practice, some procedures must be repeatedly affirmed before they become part of the physician's daily armamentarium.

In 1880, Wm. Macewen of Glasgow recorded that he had saved several patients from death by asphyxiation by using an endotracheal tube.

Six cases are reported, all from military service, but similar situations arise in civilian life. Accidents, brain tumours, poliomyelitis, asphyxia and drug depressions, all cause weakness of the respiratory musculature and depressed cough reflex.

The following methods for tracheo-bronchial drainage are described.

1. The single catheter method in which endotracheal aspiration is accomplished by a No. 16 French soft rubber catheter.

2. Suction with a small catheter through a wide bore endotracheal tube.
3. Suction through a bronchoscope.
4. Suction through a tracheotomy.

ANGUS A. CAMPBELL.

Treatment of Tuberculosis with Streptomycin: A Summary of One Hundred Cases. H. CORWIN HINSHAW, M.D., Ph.D., WILLIAM H. FELDMAN, D.V.M. (Rochester, Minn.), KARL H. P. FUETZE, M.D. (Cannon Falls, Minn.). *Jour. A.M.A.*, 1946, cxxxii, 13, 778.

Many of these patients had tuberculosis of more than one type and in more than one site. Only a few of those treated had tuberculosis in the nose and throat.

Streptomycin was used in 7 cases showing tubercular ulceration in the hypopharynx, larynx, trachea and large bronchi. In 5 cases prompt improvement was observed and recurrences have not been noted although treatment has been completed for a year or more.

Streptomycin is very helpful in the treatment of tuberculous fistulous tracts, especially those from the chest wall or from tuberculous lymphadenitis.

Streptomycin appears to be bacteriostatic rather than bactericidal.

Treatment of tuberculosis requires large doses of streptomycin (1-3 grammes per day) for prolonged periods.

The most frequent and uncomfortable reaction observed was a disturbance of equilibrium with diminished response to caloric stimulation.

Streptomycin is not to be regarded as a substitute for other proven forms of treatment.

The article has a table and a bibliography.

ANGUS A. CAMPBELL.

On Intratracheal Thyroid. O.PENDL. *Monatsschrift für Ohrenheilkunde,* 1947, lxxxi, 16.

After reviewing the literature, the condition is discussed and a case history given. This concerned a woman aged 64, who 11 years previously underwent thyroidectomy. Two months after the operation she received treatment for a recurrence. The present illness started with fever, cough, and dyspnœa and on admission there was marked stridor. Although a tracheotomy through a thickened and compressed trachea was carried out, she died on the following day. Post-mortem examination showed an enlarged adenomatous thyroid gland and several " polypi " in the larynx and trachea. These on section proved to have the same structure as the thyroid.

The author stresses the necessity for laryngeal and tracheal examination in cases of thyroid enlargement. The danger from hæmorrhage when taking tissue for biopsy is mentioned. Early recognition of intratracheal thyroid growths is necessary to obtain a good result from removal. The method of choice is by the intratracheal route.

H. D. BROWN KELLY.