ABSTRACTS

EAR

Otosclerosis. (*Annals of O. R. L.*, xlv, 169 and 496.)

The Central Bureau of Research of the American Otological Society, Inc., are shortly publishing Volume III on Otosclerosis. This consists of a review of the literature from 1928-35. This volume is printed in the annals. The first portion consists of an abstract of the literature, and the second portion gives an index of papers published over the period. The papers are too extensive to permit of any abstract here, but they are recorded for reference.

An Experimental Analysis of the Vestibular Pointing Test. R. M. DORCUS (Baltimore) and O. H. MOWRER (Princeton). (*Annals of O. R. L.*, xlv, 33, 1936.)

The post-rotational past-pointing reaction, in general, bears a constant and specific relation in the direction of the preceding bodily rotation in normal subjects, but there are certain anomalies, both in amplitude and direction, which are investigated in this paper. Two factors may play a part in this reaction :

1. The sensory illusion based upon vertigo.
2. The reflex tonic imbalance produced in the muscles of the arm executing movement.

If the former factor alone is correct it should be possible to abolish the reaction by hypnosis. Experiments were made on a group of eight subjects, and it was found that the responses were unpredictable and inconsistent in hypnotized subjects.

Again, if sensory illusion is the main factor, there should be some difference in the response, dependent upon whether the object of external reference is known to be stationary or rotating with the person investigated. When this was investigated in a series of twelve subjects without previous experience, the results were still somewhat inconsistent. These results can be explained only by assuming :—

(*a*) That the majority of subjects recognized post-rotational vertigo as an illusion and disregarded it, and

(*b*) That the vestibular stimulation must induce a tonic imbalance to the muscles, which, however, the patient tries to correct.

If these assumptions are correct it follows that if the patient be asked to execute a movement of the arms, which has no objective reference, the efforts to compensate should, to a large extent, be

eliminated. Experiments to elucidate this show that the results are more consistent both in amplitude and direction.

GILROY GLASS.

The Surgical Repair of Facial Nerve Paralyses: A Clinical Presentation. ARTHUR B. DUEL. (New York.) (*Annals of O. R. L.*, xlv, 3, 1936.)

Further experience in the surgical treatment of facial nerve paralysis has taught that, although brilliant results can be expected from a nerve graft, the functional results can never be perfect, and there will always be certain inco-ordination of the muscles on the repaired side. This is due to a certain number of neurones wandering in a wrong direction in the process of regeneration. It does not, however, alter the fact that better results can be obtained from a Ballance-Duel operation than any other form of surgical treatment.

The attitude towards Bell's palsy has been somewhat clarified. Duel now believes that some 80 per cent. of cases never lose their faradic response, and that these cases will recover completely. In the remaining 20 per cent. in which the faradic response is lost, recovery is never complete without operation.

THE AFTER-CARE OF SURGICAL REPAIR OF THE FACIAL NERVE.

Thomas G. Tickle (New York) has been working in collaboration with Arthur B. Duel, and presents certain comments on the more modern technique of the Ballance-Duel operation. In a certain number of cases sepsis of the wound was found some four or five days after operation and it was thought that the external auditory meatus was the probable source of infection. This is now prepared by filling with 3 per cent. tincture of iodine for five minutes, after which it is emptied and twice filled with 95 per cent. alcohol. In order to remove the slightest remains of antiseptics the canal is thoroughly washed out with sterile saline. This treatment has eliminated sepsis.

The nerve should, in all cases, be exposed from the stylomastoid foramen up to and proximally to any injury. In decompression operations for Bell's palsy the wound is closed completely without covering with dental gold foil as was done formerly, but this is adhered to in the cases in which sepsis is present.

In the subsequent treatment of operative cases the faradic current is regarded as useless except for purposes of diagnosis. The use of a galvanic current for a few minutes once or twice weekly is beneficial in keeping up the tone of the muscle, and is continued until the movements have reached their maximum. Operation is not advised in cases where there is no response in the muscle to galvanic stimulation. GILROY GLASS.

Nose and Accessory Sinuses

NOSE AND ACCESSORY SINUSES

Seasonal Hay Fever and Asthma due to Moulds. SAMUEL M. FEINBERG. (Chicago.) (*Jour. A. M. A.*, cvii, 23, December 5th, 1936.)

The writer believes that seasonal hay fever and asthma due to moulds is a definite and important allergic entity, second only in importance to pollen disease. In this communication the discussion is limited to non-pathogenic fungi, the spores of which contaminate the air.

The evidence for the ætiological factor of moulds consists of positive skin and passive transfer tests, the history of a " season " which does not entirely conform with pollen reactions, clinical observations of the patients and comparison of their symptoms with reference to daily pollen and mould counts, and the good results obtained when pollen treatment has failed. Most of these patients can be grouped before sensitization tests are made.

Treatment resembles very closely that of pollen therapy and systemic reactions have been encountered. Of twenty-eight patients treated by specific mould desensitization and observed at least during one season twenty-three obtained satisfactory results.

ANGUS A. CAMPBELL.

The Treatment of Allergic Rhinitis. L. W. DEAN ; LLOYD D. LINTON ; H. M. SMIT ; L. W. DEAN, JR., and CHARLES MAHONEY. (St. Louis.) (*Jour. A. M. A.*, cviii, 4, January 23rd, 1937.)

A group of scientists, some of whom were not doctors of medicine, conducted this investigation with particular reference to zinc ionization and the control of chronic vasomotor rhinitis. Both animal and human subjects were used. In the human nose, taking biopsies before and after, the final results of ionization are fibrosis and thinning of the tunica propria ; that the basement membrane is thickened ; that there is hyperplasia of the epithelium with increased metaplasia ; that very few goblet cells are present ; that sometimes there is thickening of the vessel walls, particularly the capillaries ; that the number of eosinophils in the tissue is not decreased, and that the secretory glands are partly destroyed. These changes result in an interference with the secretory function of the nasal membrane, and the membrane does not swell as easily as it did before. Ionization does not change the allergic status of the body in any way.

Every case of boggy mucous membrane should not only have a complete allergic study but dietary, bacteriological and endocrine studies as well. Vasomotor disturbances result from infection and repeated attacks of allergic rhinitis.

Abstracts

The treatment of allergic rhinitis is so intimately connected with the treatment of chronic vasomotor rhinitis that the two cannot be separated. Good results often follow removal of adenoids and correction of deflected septums. Patients who are highly sensitive to ragweed pollen, and who have plus four reagins in the blood stream, are very difficult to handle except by the avoidance of allergens. Ionization may give a good result in patients with a maximum of chronic vasomotor rhinitis, and a minimum of allergy. A study was made of the actions of other substances such as radium cautery, surgical diathermy, alcohol, phenol and 50 per cent. trichloracetic acid. In all these there was a definite picture of fibrosis and hyperplasia producing deleterious changes in the nasal mucosa.

The article occupies fifteen columns and has a bibliography.

ANGUS A. CAMPBELL.

TONSIL AND PHARYNX

On the Finding of Tubercle Bacilli in the Tonsils. K. MENZEL. (*Monatsschrift für Ohrenheilkunde*, lxxi, 83, 1937.)

Seventy-five pairs of tonsils removed by tonsillectomy were examined both histologically and bacteriologically. Professor Lowenstein obtained from the tonsillar tissue in five cases tubercle bacilli in pure culture. Histologically, definite tubercle-formation was found in only one case, which incidentally belonged to the series from which positive cultures were obtained.

The five cases in question were women, three of whom had acute polyarthritis at the time of tonsillectomy, or in their past history. In the remaining two, there was no joint affection, but one had suffered from recurrent attacks of sore throat.

Four of the patients suffered from a chronic subfebrile pyrexia and a degree of pulmonary tuberculosis. The temperature did not subside with tonsillectomy, from which one might assume that it was not connected with the bacillary depôts in the tonsils but was due to the pulmonary disease.

These findings suggest a relationship—although possibly not a direct one—between the polyarthritis and the finding of tubercle bacilli in the tonsils. In all probability there is here a generalized tuberculous infection of the organism which results on the one hand in the presence of bacilli in the tonsils and, on the other, a joint rheumatism exhibiting an allergic phase of the infection, in so far as in all cases positive lung findings were obtained.

DEREK BROWN KELLY.

Miscellaneous

MISCELLANEOUS

The Treatment of Encapsulated Brain Abscess. EDGAR A. KAHN. (Ann Arbor, Mich.) (*Jour. A. M. A.*, cviii, 2, January 9th, 1937.)

The writer describes a technique consisting of direct cortical exposure of the abscess, uncapping the presenting wall and packing of the cavity in one stage. The increased intracranial pressure theoretically everts the abscess wall. The percentage of epilepsy following brain abscess has been exceedingly high and this is believed to be the result of massive scar formation.

Preliminary to the drainage of any brain abscess the original bony focus is obliterated should one be present. From one to two weeks after this procedure, depending on the condition of the wound and the patient, a trephine opening is made over the suspected area under local anæsthesia. The dura is opened and a dull exploring cannula inserted through the cortex in the direction of the abscess. When the rubbery feel of the wall is encountered the cannula is withdrawn without piercing the capsule. The bony opening is then enlarged to about 38 mm. and the dura further opened in a stellate manner. The brain then herniates slightly. The surface vessels are coagulated and the arachnoid sealed to the cortex at the margin of the wound. An iodoform pack is inserted to promote the formation of adhesions. Three or four days later the abscess capsule, if not bound down, will migrate to the surface, covered by œdematous brain. The latter is now easily removed by suction. The abscess may be drained or excised under nitrous oxide. The writer believes that if one waits long enough the abscess will completely extrude itself. Brain herniation may be limited by lumbar puncture and dehydration.

Four cases of frontal lobe abscess are reported, three of which recovered.

ANGUS A. CAMPBELL.

Glossopharyngeal Neuralgia. W. B. HOOVER and J. L. POPPEN. (Boston.) (*Jour. A. M. A.*, cvii, 13, September 26th, 1936.)

Trigeminal and glossopharyngeal neuralgias are alike in all respects except the location of the agonizing flashes of pain and the location of the " trigger " areas. The areas in glossopharyngeal neuralgia include the pharyngeal wall, tonsillar area, the base of the tongue and occasionally the ear, while in trigeminal neuralgia they are the mucous membrane about the mouth, lips, nose and various areas on the face. In all cases careful examination should be made of the larynx, upper end of the œsophagus, the palate, tonsils and posterior molar teeth, because malignant conditions

in these regions may produce symptoms suggestive of a glosso-pharyngeal neuralgia.

Alcoholic injection is not feasible because of the smallness of the nerve and its very close relation to the vagus, jugular and hypoglossal nerves. Inhalations of from fifteen to thirty drops of trichloroethylene three or four times a day has really been very efficient in giving marked relief from this condition. The surgical treatment of choice is the intracranial section of the IXth nerve in the posterior fossa. This exposure makes it possible to exclude tumours in this area. Following intracranial section of one glosso-pharyngeal nerve patients are not conscious of any paræsthesia or discomfort whatever.

The article is illustrated and has a bibliography.

ANGUS A. CAMPBELL.

Treatment of Tuberculosis of the Mucous Membrane by Freezing with Carbon Dioxide Snow. DR. HANS ESCHWEILER. (*Zeitschrift für Hals-Nasen-und-Ohrenheilkunde*, xli, 129, 1936.)

This method was first introduced by Teebrügge and Nussbaum four years ago. It has been used at the Leipzig Clinic for the last year.

An instrument devised by Teebrügge for the application of CO_2 Snow to the larynx has been improved.

Prognosis is best in cases of not too extensive disease of the mucous membranes of mouth and pharynx: this applies to cases of disease of the mouth and fauces where cure is obtained by scar formation without disturbance of function.

Prognosis too is favourable after treatment of isolated ulcers of the epiglottis. Lastly this treatment is helpful in diminishing pain in cases of severe œdematous or ulcerating tuberculosis of the epiglottis, but a cure cannot be hoped for in these cases because there is usually infiltration of the arytenoid region. CO_2 Snow treatment is not advised in cases of perichondritis of the arytenoid region, nor in cases of non-ulcerating infiltration of the posterior laryngeal wall.

The author refers to Teebrügge's article for the technical details of the treatment.

F. C. W. CAPPS.

Water Balance in Surgery. W. G. MADDOCK and F. A. COLLER. (Ann Arbor, Michigan.) (*Jour. A. M. A.*, cviii, 1, January 2nd, 1937.)

Under conditions of health the water balance of the body is maintained at a fairly constant level. The vaporizing process may be regarded as having "preferential rights" on available water over that of the kidneys. During the operative and four

hour post-operative period a water loss of about 1,000 c.cm. takes place, more than half of which is lost by evaporation. Much of that fluid can be saved if the patient is not bundled up too much with extra blankets. Adult surgical patients convalescing smoothly from major operations were found to vaporize from 1,000 to 1,500 c.cm. of water daily. This amount is greatly increased in patients with hyper-thyroidism or pyrexia. The daily water requirements for excretions is about 3,500 c.cm. If the patient is taking some fluid by mouth this may be deducted from the total while any abnormal losses, such as excessive vomiting and hæmorrhage, should be added to the total.

There are no quantitative tests to show the degree of dehydration, so the usual clinical signs must be looked for, such as dry hot skin, dry tongue, sunken eyes, slight fever and diminished urinary output. When these signs are present body fluids amounting to at least 6 per cent. of the patient's body weight have been lost, and a person weighing sixty kilogrammes would require 3,600 c.cm. of fluid in addition to the 3,500 c.cm. normally needed in the first twenty-four hours.

The writers prefer the intravenous route to subcutaneous infusions. Some dextrose should be given to all patients requiring water parenterally but the amount of sodium chloride administered requires more careful calculating. Ringer's solution is the fluid of choice for patients needing sodium chloride. It is always satisfactory to give an amount equal to the amount of vomitus. Sodium chloride is not needed as a routine and patients with a considerable loss of fluid before admission to hospital should have a blood chloride and carbon dioxide combining power investigation done to show the depletion of chloride and basic ions respectively.

ANGUS A. CAMPBELL.