ABSTRACTS

EAR.

Some Limitations of the Monro-Kellie Hypothesis. LEWIS H. WEED. (*Archives of Surgery*, 1929, Vol. xviii., pp. 1049-1068.)

The author conducted a series of experiments on the alterations of cerebrospinal pressure during changes of posture. As a result of these experiments he concludes that, taken as a whole, the Monro-Kellie doctrine must be considered essentially sound. At the same time, in certain minor points, it does not exactly apply. In the first place, in early life the presence of the fontanelles forbids too rigid an application, and for some time the suture lines are extensible. In spite of this the thesis applies fairly well. In the adult the spinal region is apparently not a rigid system. The collapse of the spinal dura against the cord and changes in volume of the veins do not completely compensate extreme negative pressure due to postural change. F. W. WATKYN-THOMAS.

Localisation of Sound. T. C. GREENE. (*Archives of Surgery*, 1929, Vol. xviii., pp. 1825-1841.)

The author summarises his results as follows:—

1. The ability to localise sound in the lateral plane is a definite sense which is constantly giving accurate and useful information.

2. If a subject hears a sound on the right side, for instance, he knows that the sound is on the right side for two reasons: (*a*) Each sound-wave reaches the right ear before it reaches the left ear. (*b*) The sound is louder in the right ear. These two factors in the localisation of sound may be called the "time" and the "intensity" factors. Clinical evidence suggests that the time factor is the more important.

3. In this paper a study of the ability of 100 subjects to localise sound is reported. Of these subjects, 19 were controls, 13 were otological patients, and 68 were neurological patients. Among the neurological patients the diagnosis of tumour of the brain was verified in 42 cases; the diagnosis was probable in 14 other cases.

4. The localisation of sound under natural conditions is effected by the simultaneous use of the time and intensity factors which were mentioned previously. Apparatus was devised with which the use of these factors in localising sound was tested separately. The apparatus demonstrated definite impairments in the ability to localise sound which were not detected by the test for sound localisation under

the usual conditions of hearing, in which the subject could use the time and intensity factors simultaneously.

5. Most patients with disease of the middle ear who were tested localised sound with almost normal accuracy.

6. There is no constant relation between an impaired ability to localise sound and tumours in any one part of the brain.

7. However, tumours of the temporal lobe were found proportionately more often among patients with an impaired ability to localise sound than among patients with a normal ability to localise sound. Choking of the discs and increased intracranial tension as found at operation were more common in the group with an impaired ability to localise sound than in the group with a normal ability to localise sound.

8. Suggestions for further work are made. Incidentally, a method for localising functions in the brain is suggested in which an electrical current from the cerebral cortex would be used. Such a current would be caused by a difference of potential produced by nerve impulses reaching the cortex.

From these results the author concludes that there are two possible interpretations of the observations reported in this paper:—

1. Lesions of the temporal lobe tend to impair the ability to localise sound.

2. Increased intracranial pressure tends to impair the ability to localise sound. (Special localising tests are necessary to demonstrate these impairments.) F. W. WATKYN-THOMAS.

Clinical Study and Operative Treatment of Brain Abscess of Otitic Origin. JEAN PIQUET and JEAN MINNE. (*Archives Internationales de Laryngologie, January* 1930.)

This article forms the entire contents of the January issue. The first stage in the process of brain infection is osteitis of the mastoid bone. Osteitis does not mean rarefaction or hyperosteosis, which are secondary and late results of infection, but infection of the Haversian systems which may be converted into veritable pus chambers. The next stage is the spread of the infection through the dura mater. This spread may occur (*a*) by a vascular route, either along the small veins or the perivascular spaces; (*b*) by direct extension. The passage of germs through the meninges is always associated with the formation of adhesions. These, whilst allowing the passage of germs into the cerebral substance, tend to stem the spread of infection in the subarachnoid space. However resistant may be the dura mater, once it is exposed it is liable to infection and occasionally to perforation. A so-called "intradural abscess" may result, encysted between the layers of the meningeal adhesions. The vascular route is commonest in the

acute cases, direct extension in the chronic cases. In both conditions adhesions are formed, but in the vascular route of infections adhesions are formed later. It is particularly in this form of spread that post-operative adhesions should be encouraged by the method of Lemaître.

Infection of the cerebellum is, in the majority of cases, via the labyrinth. According to Eagleton cerebellar infection occurs in (*a*) 45 per cent. of cases through the labyrinth; (*b*) 32 per cent. through lateral sinus thrombosis; (*c*) 22 per cent. by direct extension through a carious mastoid.

Pathological Anatomy.—As a general rule one may say that the abscess is situated in the immediate vicinity of the bony lesion which gave rise to it. The following are the recognised anatomical forms: (1) Diffuse—non-purulent. Not amenable to surgery and always fatal. (2) Purulent—(*a*) diffuse; (*b*) multiple foci. Seldom amenable to surgery, and the prognosis is poor. (3) Single or circumscribed. Amenable to surgery. Prognosis good.

The authors describe in detail the evolution and pathological anatomy of these forms.

Clinical Study.—This is discussed under the recognised stages of latent and manifest periods. In the latent period the two most important symptoms are those of headache and mental dullness. In the manifest period there are the signs of increased intracranial tension, meningeal irritation and focal signs. The last are seldom present except in cerebellar cases. There follows a detailed description of these phenomena. One special point may be singled out from this description—that is, that in the authors' experience, nystagmus is an expression of increased intracranial tension, and that it occurs so frequently in temporo-sphenoidal abscesses as not to be pathagnomonic of a cerebellar condition, except that, in the latter case, it is far more intense.

Treatment.—The credit of having been the first to diagnose and successfully to treat a cerebral abscess is accorded to Macewen.

There is no single method of treatment which is applicable to all cases of intracranial otogenous abscesses, but the following principles are definitely established: (1) It is absolutely necessary to operate when the diagnosis of an intracranial abscess has been made. (2) The correct method of approach is the mastoid route.

1st Step. *Method of Approach.*—A very complete radical mastoid operation is first performed. Objections have been raised to the exploration of intracranial abscesses through a septic mastoid cavity. The authors consider that the risk of carrying infection to the brain by puncture is very slight, but they do not advise puncture in doubtful cases where the dura mater feels supple and appears healthy.

In the case of cerebellar abscesses the authors prefer the presinusal route. They reserve the post and trans-sinusal routes for those cases where either the bone lesions lead directly to the abscess, or where there is a suppurative thrombo-phlebitis.

2nd Step. *Exploration and Drainage.*—In doubtful cases, it is better to make a large exposure of dura mater. Investigation by sight and touch may give valuable evidence of a deep-seated infection. The risk of a secondary infection of the dura is less than the danger of leaving an abscess untreated.

The technique followed by the authors is as follows:—

(1) Cerebral puncture. (2) Enlargement of the field of drainage with a tenotome, and shutting off of the subarachnoid space by the method of Lemaître. (3) Drainage.

The method of enlarging the stalk of the abscess is described as being similar to that employed by Muecke. That is to say, that the method of Lemaître is adopted with the slight difference that a small breach to facilitate drainage is made through, but within, the zone of adhesions. This method has yielded to the authors six complete cures out of nine cases.

The article concludes with a detailed account of ten personal cases. A bibliography is appended. M. VLASTO.

The Treatment of Para-Syphilitic Lesions of the Auditory Nerve by Malaria. Dr A. MARSCHAK. (*Monatsschrift für Ohrenheilkunde*, February 1930.)

Prefaced by a brief review of the literature and limited investigations in this direction, the author gives an account of the treatment of fifty patients whom he was able to find amongst cases of tabes and paralysis, and in whom lesions of the acoustic nerve were present.

After a careful objective examination these cases were also tested functionally and the detailed results noted. Of the 50 cases so treated, 7 died and 18 could not be traced. There were therefore only 25 remaining in whom the results of such treatment could be ascertained in the subsequent examination conducted some four to twelve months later. Of these 25 cases, 6 were definite internal ear lesions, 3 of which after the treatment were improved. Of the remaining 3 of this group, the hearing of one was unaltered, one was slightly worse and another considerably worse. Of the other 14 cases (apparently other than definite nerve lesions) in 3 an internal ear deafness followed the malarial treatment and only 5 cases were improved.

The author considers that it is yet too early in the light of these investigations to attempt a definite conclusion on the value of malarial treatment in these cases, but he has formed the impression (as the result of such investigation) that it is not to be altogether disregarded. ALEX. TWEEDIE.

Abstracts

The Labyrinth: A Discussion in a General Way. Cl. F. Werner, M.D., Hamburg. (*Annals of Otology, Rhinology and Laryngology*, March 1930.)

The paper is a discussion on the subject in a general way. In the last few years new facts have further shaken the foundations upon which our theories of labyrinthine functions rest. Investigations are difficult. We cannot experiment on humans. By the time post-mortem examinations are made tissue changes have destroyed in large measure the delicate structures we wish to examine.

Experimentation on mammals is in many ways poor because the membranous labyrinth is small and embedded in such compact bone that experiment is difficult; also, many fine histological details are poorly recognisable. It is best to experiment on the lower vertebrates, especially fish. The fish's labyrinth is large and easily got at. It continues to grow throughout the life of the fish, whereas the new-born child has a labyrinth as large as an adult. The human labyrinth has lost its post-embryonal growth. With this reduction in size has come a simplification of structure. For example, the utriculus is a much more complicated structure in many fish than it is in the human being. Fish which have specially shaped heads have unusually shaped labyrinths, as they are not embedded in compact bone. What we deduce from the human labyrinth cannot be held as sound for all labyrinths. We must know the labyrinths of all vertebrates before we come to know the universal laws of labyrinthine physiology. In bony fish the otolith is a single structure, and the author has shown in former work how highly differentiated the otolith apparatus is. On every macula an anterior and a posterior part can be seen, the one entirely different from the other and having a separate nerve supply. The macula utriculi is the most highly developed. Theories as to function of the otoliths are mentioned. The author believes that in all vertebrates and in man hydrostatic pressure is the physiological stimulus for the macula. The fish experiments of Maxwell proved definitely that all the reflexes of position proceed from the macula utriculi. The author's experiments (1929) bear this out. Nicol M. Rankin.

New Surgical Methods of Technique for the Treatment of Conduction Deafness. Maurice Sourdille. (*Annales des Maladies de l'Oreille, etc.*, January 1930.)

This paper was read by the author last December at the meeting of the Society of Oto-Laryngology of the Hospitals of Paris. He then presented one of his cases, the ninth operated on by him in a series of twelve, and gave full details of the clinical condition of chronic deafness found before and after operation, as well as a description with

diagrams of his new technique. The functional result proved to be most encouraging, as also was the amelioration of the tinnitus.

The technique, based partly on the previous work of Bárány and Holmgren, consists of a two-stage operation. The first begins with a transmastoid attico-tympanotomy which exposes the tympanum and allows its contents to be examined and the pathological condition of the chain of ossicles to be determined. Mobility is restored to the tympanic membrane if necessary by removal of the incus or resection of the head of the malleus. A small plastic flap is cut from the postero-superior portion of the end of the membranous auditory canal, and when the drum membrane is replaced this flap is made to cover the region of the incus, aditus and antrum, with the underlying bend of the external semicircular canal. The wound is closed with temporary packing and allowed to heal. Four months later the second stage of the operation is carried out, when the mastoid wound is now reopened and the former plastic flap over the external semicircular canal will have been found secured, thus shutting off the possibility of any infection from the tympanum. The outer wall of the external semicircular canal is now exposed by turning back towards the tympanum this cuticle formed by the previous plastic flap, and this bone is carefully trephined by means of an eraseur until the membranous canal is revealed supported by its epithelium. The trephined opening is immediately closed again by the reposition of the thin, supple and well-vascularised epidermal membrane, and the wound suitably closed.

The writer, whilst admitting that a certain number of points still remain to be elucidated regarding the correct procedure of the operation, and the true explanation of the mechanism that results, concludes by stating that the results so far obtained are encouraging enough to allow hope of further progress being attained in the surgical method of treatment of chronic progressive deafness. L. GRAHAM BROWN.

Pathology and Surgical Treatment of Ménière's Vertigo. ABOULKER and SUDAKA. (*Annales des Maladies de l'Oreille, etc.*, October 1929.)

From their observation and treatment of three cases, which are described in detail, the writers attempt to explain the pathology of at least one of the etiological varieties of Ménière's vertigo.

In each case there was found to be a hypertension of the cerebro-spinal fluid, and the method of treatment consisted in a simple large retro-petrosal decompression of the posterior cranial fossa.

They class these cases, chronic otitis for the most part, in the category of encysted meningitis of the cerebellar fossa, and their operation aims at restoring the assumed interrupted equilibrium

between the tension of the cerebrospinal fluid and that of the intra-labyrinthine fluid.

Other operations devised for a similar purpose though based on different etiological hypotheses, such as trephining of the labyrinth (Botery, Milligan, Hautant), section of the auditory nerve (Chavanne and Trouilleur), and puncture of the endolymphatic sac (Portmann), are difficult and often perilous in execution; hence the writers claim for their own method greater simplicity, less risks and equally satisfactory results. L. GRAHAM BROWN.

The Primary Importance of Exploratory Puncture of the Middle Ear in the Infant. PANNETON and LONGPRÉ. (*Annales des Maladies de l'Oreille, etc.*, September 1929.)

The authors' experience in a large hospital for infants at Montreal has convinced them that, where the focus of infection is obscure, the middle ear is very often at fault. Hence they resort to exploratory puncture of the middle ear as a means of diagnosis of otitis, discarding otoscopy not only because of its difficulty in the infant, but also because of the latency of infection in many cases.

The puncture is performed without a general anæsthetic, and by means of a suitable hypodermic needle and syringe, the needle being directed by the sense of touch alone into the posterior middle portion of the tympanum. When the aspiration reveals the presence of infection, serum or pus, further operative measures such as incision of the tympanic membrane or mastoidectomy must be undertaken.

By this method the writers claim to have reduced very considerably the mortality in their hospital in the last three years, and therefore plead for its greater recognition and use as a practical means of diagnosis. L. GRAHAM BROWN.

On a Form of Nystagmus of Vasomotor Origin. O. MUCK (Essen). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Band xxv., Heft 1, p. 88.)

In a number of cases of metastatic new-growth formation on one side of the neck, Muck observed the pathological "white line" on stroking the nasal mucosa of the same side after adrenalinisation. He attributed it to interference with the vasomotor supply through the carotid plexus. He tried the effect of irritation of the plexus by pressure on the carotid in the neck, and then on the vertebral. He recalls the fact that when the head is rotated fully to one side the vertebral artery of the opposite side is bent into a "door-hook" form and is nearly occluded, the one on the same side acquiring an oblique position. In subjects showing the pathological "white line" there is slowly developed a nystagmus towards the side away from which the

head is turned, but only in these subjects, and he considers it, therefore, to be of vasomotor origin. The nystagmus is explained by the involvement of the vasomotor supply of the posterior inferior cerebellar artery which arises from the vertebral and supplies Deiter's nucleus by its "ramus oliveradicularis prim." (*sic*). He holds that in cases of irritation of the vestibular apparatus vasomotor processes should be credited with a large potential influence.

JAMES DUNDAS-GRANT.

NOSE AND ACCESSORY SINUSES.

The Recognition of Aspergillus Diseases of the Antrum of Highmore. M. MOLLARI (Innsbruck). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Band xxv., Heft 1, p. 65.)

The typical case presents a tumour-like fluctuating swelling in the mouth, from which, on incision, there is a copious flow of yellow pus. The bone of the upper jaw is rarefied and there is a free communication with the maxillary antrum. The scrapings from the interior, suspected of being of malignant nature, are found to contain extensive membranous growths of aspergillus, as confirmed by microscopical examination. In cases of disease of the antrum the possibility of the occurrence of aspergillosis should be kept in mind.

JAMES DUNDAS-GRANT.

The Treatment of Ozæna and ordinary Atrophic Rhinitis by Transplantation of Spongy Bone from the Iliac Crest. S. UNTERBERGER (Graz). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Band xxiii., Heft 4, p. 346.)

The bone is divided into small fragments, which are packed under the muco-perichondrium and periosteum. Good results were obtained in 27 out of 31 cases.

JAMES DUNDAS-GRANT.

Complications during and after Submucous Resection of the Septum. G. CLAUS (Berlin). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Band xxiii., Heft 4, p. 444.)

One case was incomplete nasal obstruction following a blow on the nose thirty years previously, becoming nearly complete during the last three years. Both sides of the septum bulged, were resistant, not tender. There was found to be a "cystic" formation containing clear yellow fluid. The sac was removed in part and the cyst did not re-grow.

Another case was the formation of an abscess in the hard palate, attributable to trauma of the part during the gouging away of the maxillary crest.

A third was erysipelas, beginning apparently in the septal incision and extending backwards before invading the cheeks and scalp.

The author comments on the—fortunately—great rarity of these complications. JAMES DUNDAS-GRANT.

External Operation on the Frontal Sinus. M. M. CULLOM. (*Archives of Oto-laryngology*, Vol. xi., No. 3, March 1930.)

After giving a complete account of the history and evolution of operations on the frontal sinus, the writer describes the technique which he adopted, with success in a series of twelve cases. His is a three-stage operation. "In practically all cases of frontal empyema," he says, "there is an associated empyema of ethmoid, sphenoid and maxillary sinuses." He operates on the antrum first, a few weeks later he does a complete exenteration of the ethmoid cells, and finally, after a further interval, he performs the external operation on the frontal sinus. He insists on complete removal of all ethmoidal cells, of the lamina papyracea, and of the middle turbinate. Wide and free intra-nasal drainage is essential, and therefore the floor of the frontal sinus must be thoroughly removed, while the anterior wall is left intact. The fronto-nasal duct is enlarged, the lachrymal bone and ascending maxilla are removed, and a large (half inch) drainage-tube is introduced into the nose. A small inner tube within the large tube gives rigidity and prevents occlusion by blood-clot. The wound is entirely closed. The small tube is removed next day and the large tube is cleansed daily by suction. Irrigation is avoided, and the writer regards it as dangerous. The tube is removed in eight or ten days and the patient is then almost well.

A series of seven figures illustrate this paper.

DOUGLAS GUTHRIE.

The Alkali-Reserve of the Blood associated with Nasal Obstruction and Enlargement of the Tonsils. E. LÜSCHER. (*Acta Oto-laryngologica*, Vol. xiv., Fasc. 1-2.)

In order to investigate the lung ventilation and acid-base content of the blood plasma in mouth breathers, the alkali-reserve was measured according to the method of van Slyke. Complete nasal obstruction produced for experimental purposes in healthy persons led to a fall in the alkali-reserve which reached its maximum in one hour. In cases of nasal obstruction due to disease (deflected septum, polypus, turbinal hypertrophy) the alkali-reserve is relatively low as compared with the normal, but the fall is less than in artificial nasal obstruction.

The fall in the alkali-reserve must be due to an alteration of the gaseous exchange in the lungs, and this depends on the character of the respiration. The result of the fall is a movement of the acid-base balance in the blood toward the acid side, so that the substitution of mouth- for nose-breathing causes a change in the chemistry of the blood and may thus have a direct chemical influence on the organism.

Enlargement of the tonsils is associated with a fall in the alkali-reserve apart from any nasal obstruction, and must be ascribed to some perversion of metabolism. THOMAS GUTHRIE.

Some Considerations on the Surgical Treatment of Ozænic Atrophic Rhinitis. TZETZU and ANDREESEN. (*Annales des Maladies de l'Oreille, etc.*, October 1929.)

From their own experience of the surgical treatment of ozænic atrophic rhinitis, whichever of the many methods devised for narrowing the nasal fossa is used, the writers come to the following conclusions:

Definite cure rarely results. An amelioration of the condition for a period of three to four months is the most that can be expected. The submucous transplantation of living grafts by the endonasal or gingivo-labial path is the most practical method, but operation is only indicated when the utility of the nasal mucosa is not too greatly reduced and its elasticity is still conserved. However, whatever may be the method of operation employed, it cannot be considered as a treatment of the cause. Applied in the most favourable cases and in the best conditions of execution, it can only be considered a symptomatic form of treatment whether it is confined to surgical treatment alone, or is combined with other therapeutic methods.

L. GRAHAM BROWN.

The Sign of the Inferior Conjunctival Cul-de-sac in Transillumination of the Maxillary Antrum. P. DELOBEL. (*Annales des Maladies de l'Oreille, etc.*, August 1929.)

It is a well-known fact that the various signs previously described by Heryng, Vohsen-Davidson, Sarel-Burgher and Robertson in trans-illumination of the maxillary antra do not always give precise information as to the presence of suppuration in either cavity.

The author prefers, therefore, a method of his own which consists in allowing the patient himself to hold the lamp in his mouth whilst the observer compares the relative transparency of the two lower conjunctival sacs by drawing each lower eyelid downwards with the thumbs. The sign is particularly useful when employed in cases of osteo-periostitis of the canine fossa due to spread of dental infection, and in patients with dense facial bones. L. GRAHAM BROWN.

Abstracts

LARYNX

Peritracheal Abscess. L. RICHARDS. (*Archives of Oto-laryngology*, Vol. xi., No. 3, March 1930.)

Mediastinal abscess offers a much more hopeful prognosis than does acute mediastinitis. A mediastinal abscess may result from a downward spread of infection from an abscess of the neck, and may often be drained by surgical means. Acute mediastinitis may follow injury, such as perforation of the œsophagus by gunshot or by an instrument, and the infection is fulminating, spreading and usually hopeless. Localised mediastinal abscess must be distinguished from an encapsulated empyema, an abscess of the lung, or an infection of the thymus gland.

The writer reports the case of a child, aged one year, admitted to hospital owing to dyspnœa of four days' duration. There was cough, rapid respiration and temperature of 104° F.; the diagnosis was broncho-pneumonia. Direct examination of the larynx revealed œdema of both arytenoids and it was necessary to perform tracheotomy. On separating the pretracheal muscles there was a gush of pus from a cavity, which appeared to be behind the trachea. The trachea was not opened, as it was felt that the dyspnœa had been due to the pressure of the abscess. On culture the pus showed a hæmolytic streptococcus. After operation there was less dyspnœa, but well-marked dysphagia, and the temperature remained irregular for several days, but the patient made a complete recovery.

The X-ray film before operation showed a shadow in the right upper part of the chest, and this disappeared after drainage of the abscess. It was uncertain whether the condition was: (1) an encapsuled empyema and a cervical abscess, or (2) a mediastinal abscess extending into the neck.

It is interesting to note that Lerche has performed the experiment of injecting barium into the groove between the trachea and œsophagus, and noticed that when the force was increased the mass extended into the mediastinum and crossed in front of the trachea to the opposite side.

The present case is reported as peritracheal abscess, as it is uncertain whether it was a true mediastinal abscess.

The paper is illustrated by drawings and radiograms.

DOUGLAS GUTHRIE.

A New Method of Treatment of Hysterical Aphonia by Curettage of the Naso-Pharynx. V. FOTIADE. (*Annales des Maladies de l'Oreille etc.*, October 1929.)

By accident the writer discovered that curettage of the post-nasal space, as in the operation for adenoids but without anæsthetic, brought

about in a patient suffering from functional aphonia permanent cure of the condition. He has since applied the method to other cases with invariable success. He explains the rationale of his method of treatment as follows:—

When employing other methods, electrical or otherwise, one seeks to convince the patient of the non-existence of the imaginary disease, that is to say, one attempts to destroy the pathological auto-suggestion by violence or by persuasion. By the author's method, however, one respects for the time being the suggestion of the patient and then makes it disappear in a rational way by another much stronger suggestion, the surgical act. By proceeding to an actual intervention (curettage of the nasopharynx) the patient is the more easily convinced of the removal of the vocal obstacle seeing that he himself is a witness of it. L. GRAHAM BROWN.

Contribution to the Treatment of Laryngeal Tuberculosis by Sanocrysin. Dr FERRANDO. (*Annales des Maladies de l'Oreille etc.*, December 1929.)

Twenty cases of laryngeal tuberculosis are described in detail by the author, in which he gives the history of the patient, the form of the laryngeal lesion, the pulmonary condition, the dosage of sanocrysin, and the results of treatment. This comprises 12 positive, 3 negative and 5 favourable results. From this study he draws the following conclusions:—

Sanocrysin administered by intravenous injections can determine favourable modifications and even clinical cures in certain forms of laryngeal tuberculosis.

This method of treatment is best indicated in the congestive or circumscribed infiltrative forms. In the diffuse infiltro-ulcerative cases it is contraindicated. Intermediate forms represent the limit of indication for cure by sanocrysin.

The complexity of clinical phenomena to which the treatment can give rise, makes constant collaboration with the lung specialist indispensable.

The actual administration of the drug, by commencing with small doses (5 to 10 c-grms.) and watching very carefully the general condition of the patient each time the dose is increased, as well as the selection of the cases in accordance with the rules indicated, ensure that the sanocrysin method of treatment is to-day exempt from the grave dangers to which it has formerly been exposed.

L. GRAHAM BROWN.

Abstracts

TONSIL AND PHARYNX.

Experimental Investigations of the Relation between Bodily Growth and the Tonsils. M. SLOBODNIK (Berlin). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Band xxiii., Heft 4, p. 372.)

Experiments made on young rats with the addition of tonsil tissue to their regular diet showed an acceleration in growth when it was given by the mouth but a slowing when injected subcutaneously. The faucial and pharyngeal tonsils appear to have some action in common with other organs which have an internal secretion. This is an endeavour towards solving the question of the internal secretion of the tonsils, which seems to be still unsolved.

JAMES DUNDAS-GRANT.

Mixed Tumours in the Soft Palate. R. SONNENSCHEIN. (*Archives of Oto-laryngology*, Vol. xi., No. 2, February 1930.)

The writer gives a synopsis of recent literature on the subject, mentioning the important papers of Heineke in 1913 (360 recorded cases); of M'Farland in 1926 (90 new cases); and of Fry in 1927 (25 cases from St Mary's Hospital, London).

The most important clinical fact regarding these tumours is their long duration and slow development. Many exist for thirty, forty or fifty years before causing serious trouble to the patient. The largest mixed tumour of the parotid gland on record weighed 26 lbs.

Two cases have been personally observed by the writer and are recorded in detail, with seven microphotographs.

The conclusions are as follows:—

1. Mixed tumours involving the soft palate are rare.
2. Their exact origin is not definitely known. Some authors believe that they are entirely epithelial, and others that they are the result of "enclavement" or accidental sequestration of embryonal cells during the early and complicated development of the base of the neck.
3. These tumours are probably individual entities having no relation to the normal structures in which they occur and from which they do not arise.
4. While they are apparently benign, they often recur after removal. If frequently disturbed, they may become locally destructive even though they produce no metastases.
5. When histologically examined, they may show an apparently malignant character, although clinical history usually shows the contrary. In other words the prognosis should be determined from the history of the case and not from the histologic observations. DOUGLAS GUTHRIE.

Tonsil and Pharynx

Chondroma of the Eustachian Cushion in the Nasopharynx. K. A. DRENNOWA. (*Monatsschrift für Ohrenheilkunde*, Year 64, Vol. i.)

This case occurred in a woman of 32 who complained (2nd February 1929) of a painless growth which she had accidentally discovered whilst looking at her mouth in the mirror some two and a half months before, and which now began to give her unpleasant sensations as of a foreign body.

On examination a tumour was found about the size of a hazel-nut—hard in consistency, growing from the region of the right eustachian cushion with a broad attachment, and apparently covered with normal mucous membrane. Some four days later this was removed piecemeal by the conchotome under a local anæsthetic. Convalescence was uneventful. The growth was irregularly horse-shoe in shape; the microscopic examination revealed a cartilaginous core with fibrous tissue intermingled, and a very definite fibrous capsule covered by normal mucous membrane, with blood vessels disseminated throughout.

The author considers that the condition might be the result of some inflammatory disturbance, but dismisses this as most unlikely and inclines to the view that it was an aberrant formation in connection with the branchial cartilages. He has been unable to find any reference to a similar condition in the literature at his disposal. (Apparently an almost identical case was shown at the meeting of the Laryngological Section of the Royal Society of Medicine on 1st November 1912. See *Journ. Laryn., Rhin. and Otol.*, 1913, p. 203. A. R. T.)

ALEX. R. TWEEDIE.

Explantation Experiments with Tonsillar Tissue. G. KELEMEN and A. HASSKÓ. (*Acta Oto-laryngologica*, Vol. xiv., Fasc. 1-2).

EXPERIMENTAL FORMATION OF TONSIL RETICULUM.

Rabbits of different ages were experimented upon. The culture medium consisted of blood freshly taken from the animal itself with a small addition of heparin. Even after twenty-four hours a disappearance of the follicles is observed besides a general disintegration, just as in man. Very soon an emigration of the lymphocytes towards the surface begins, gradually emptying the meshes of the reticulum. The explanation of such a final result is the following:—

The whole culture gives the impression of a honeycomb, because the reticulum meshes are now empty. Only the cells in the walls are left; they form in most cases a network of one layer only, rarely—at least apparently—of two layers. The strong trabeculæ of the connective tissue septa which carry blood-vessels act as a supporting frame.

Abstracts

EXPERIMENTS ON EMIGRATION OF LYMPHOCYTES IN THE TONSILS.

In this experiment dogs were used and the same technical method was followed. The object of observation was the conduct of the emigrated lymphocytes in spontaneously infected explantations. The bacteria found in these cultures had in previous cases been identified as staphylococcus and Gram-negative rods. Where the disturbing effect of these stimuli increased, a slight transparency first formed around the colonies agreeing with the liquefaction of the surrounding tissue. When the lymphocytes were still capable of taking up the fight, they formed strong opaque zones around the colonies. These showed clearest where the colony was seated in the middle of the explanted piece of tissue. If they developed at the edge of it the lymphocytes congregated in dense multitudes at the place in question.

The sections showing the cells lining the crypts and the bacterial accumulations lying at the cryptal orifices, showed a distinct migration through the layers of the wall. If, however, the colonies lay at a great distance in the culture medium, then here, too, the lymphocytes were seen to surround them.

The latter, therefore, also migrate at a great distance from the original cell-structure according to the same laws, *i.e.* they show the same behaviour as in the explanted piece of tissue.

AUTHOR'S ABSTRACT.

A Simple Procedure for the Cure of Palato-Pharyngeal Stenosis.
P. JACQUES. (*Annales des Maladies de l'Oreille, etc.*, August 1929.)

The writer's method is based on the principle that, in order to avoid the inevitable tendency of surfaces of fibrous adhesions such as connect the palate to the pharyngeal wall to re-form after section, it is essential to suppress the continuity of the two granulating surfaces opposite one another at the level of the external angle of division. To do this, he borrows the procedure which brings about epidermisation for the wearing of ear-rings, and is applied to the cure of syndactyly.

The operation is carried out in two stages:—The first consists in the introduction of loops of rubber tubing, by the use of a Reverdin's needle passed through the nose, through each external angle of the palato-pharyngeal adhesion and the small natural opening which usually persists in the middle line. If the latter is absent altogether, one loop alone suffices and is passed through the two external angles.

The second stage, carried out a month later when epidermisation of the external transfixed tracks is usually complete, consists in substituting for the rubber tubes wire snares, and connecting these to an ordinary electric cautery instrument. The adhesions are then gently burnt through at a low temperature. Healing takes place, and there is no tendency for fresh union to occur. L. GRAHAM BROWN.

Tonsil and Pharynx

Parapharyngeal Abscess. E. WATSON-WILLIAMS. (*Lancet*, 1930, i., 792.)

The author's paper may be summarised as follows:—

1. Parapharyngeal abscess resembles in its clinical features peritonsillar abscess; the most striking difference being the absence in the former of œdema of the palatal mucosa.

2. It is a condition which should be expected when a quinsy appears to run an anomalous course, or when incision in the usual site above the tonsil fails to locate pus.

3. Parapharyngeal abscess tends to point low in the side of the pharynx behind the posterior faucial pillar; it is easily opened here by slight pressure with a blunt instrument, which alone is permissible. A general anæsthetic is necessary. MACLEOD YEARSLEY.

The Tonsils and some Experiences of their Surgical Treatment. HERBERT TILLEY. (*Laryngoscope*, Vol. xxxix., No. 121, p. 777.)

The author gives his views on some interesting points in the surgery of the tonsils. After an experience of thirty-three years these views are of considerable importance, and great stress is laid on the prevention of post-operative tonsil hæmorrhage by ligature of the descending branch of the posterior palatine artery and, if necessary, the tonsillar branch of the facial. For the last fifteen years he has dissected all his tonsils, and the cases requiring active intervention for hæmorrhage were only 1 per cent. as compared with 5 per cent. when the guillotine was used.

To ligature a bleeding vessel requires only five to six seconds and he suggests that it is the duty of those who call themselves specialists to acquire the practice and dexterity required to recognise and tie the chief arteries which supply the tonsils.

Mention is made of malignant disease of the tonsil, and a solution is given of some of those cases where a mass of hard glands exists at the angle of the jaw, with no visible primary lesion in the throat or nasopharynx. In a few of these cases enucleation of the tonsil and examination microscopically revealed the presence of a small and unsuspected primary growth. Tuberculous infection of the tonsils is not common, and occurs in about 5 per cent. of cases; probably enlargement of the tonsil is due to pyogenic organisms, and this brings about cervical adenitis which later on becomes infected by tubercle bacilli.

One of our most important problems lies in the attitude we as surgeons should adopt in cases of acute rheumatism with infected tonsils.

Two cases are cited in which the heart sustained serious damage following tonsillectomy. Two questions are asked and no answer is

given: (1) When do the tonsils lose their protective function and become a source of danger? (2) How are we to determine when convalescence from an attack of acute rheumatism is so complete that we may safely remove diseased tonsils in order to prevent or minimise the chances of a further attack? ANDREW CAMPBELL.

ŒSOPHAGUS AND ENDOSCOPY.

On the Treatment of Cicatricial Strictures of the Œsophagus. Dr GONZALEZ DUARTE. (*Revista Española y Americana de Laringologia*, Vol. xxi., p. 97, March 1930.)

A girl of eight had swallowed some lye at the age of two. The treatment only caused bleeding and a stricture of the œsophagus followed. In this state she was taken to the Philippine Islands, where treatment again failed and large doses of fibrolysin were tried. After some years she returned to Spain and was treated at Bilbao and afterwards in France, where the mother was advised to accept with resignation that there was no remedy. At this stage she was taken to see Professor Tapia in Madrid, who thought treatment by the oral route impossible and advised the procedure of von Hacker with gastrostomy. Œsophagoscopy showed a saccular dilatation of the œsophagus with a blind pouch posteriorly. With difficulty a tiny orifice was found in the dilatation, admitting only the point of the finest sound. A radiogram showed that the dilatation was opposite to the body of the second dorsal vertebra, and from the anterior part an oblique track led to multiple strictures occupying the whole of the œsophagus. The child was very emaciated and was much below her real age in appearance.

It was decided to make her swallow a silk thread. Small pieces of metal have to be attached to the end, so that X-rays can show when it reaches the stomach. In this case, the strictures being so narrow, the end of the thread was fixed in a tiny tube of silver, known to cast a sufficient shadow on the X-ray screen.

After three days it was ascertained that the thread, fixed at the other end to the upper jaw, had reached the stomach. A small incision was made in the anterior wall of the stomach and the thread was withdrawn. (It is much easier to do this than to perform a preliminary gastrostomy and then search for the thread when it has arrived at the stomach. If this plan is followed, however, the easiest way is to fill the stomach with water, search with a cystoscope for the thread and so extract it under vision.)

To the end of the thread another was attached in the form of a loop and drawn up backwards out of the mouth. The operation ended with

a gastrostomy, through which passed the double thread and a tube for feeding the patient. After a week the number of silk threads was increased daily, two at a time, until the number of twenty-six was reached. In order to avoid knots as far as possible the whole number of threads was renewed daily, except one which was tied to the middle of the hank. Thus a loop was formed on which traction could be made in an upward direction. The upper end was brought out through the nose and fixed to the upper jaw, but at the time of removal it was withdrawn through the mouth to avoid damage to the palate. The hank of twenty-six threads was of sufficient calibre to enable American sounds, whose extremity carried a silk thread firmly fixed in the texture, to be substituted. A series of sounds of increasing size was left daily in the œsophagus without doing any damage. When a sound of more than a centimetre in diameter had been introduced quite easily in this retrograde way, semi-rigid olivary sounds were passed through the mouth without difficulty. The feeding-tube was then withdrawn and the gastric fistula soon closed spontaneously. The size of the sounds was then increased and the child learnt to pass a sound on herself daily.

The gastrostomy has the advantage of enabling the patient to be fed easily, and also of allowing continuous dilatation. The method of Witzel is not suitable, but the fistula should be formed by invaginating a cone of stomach wall. The base of the cone adheres to the parietes and the apex projects into the cavity of the stomach where it is freely movable. L. COLLEDGE.

MISCELLANEOUS.

Aneurysm of the Ascending Palatine Artery: Chronic Cough relieved by Ligation. HAROLD BRUNN and A. LINCOLN BROWN (San Francisco). (*Journ. Amer. Med. Assoc.*, Vol. xciv., No. 1, 4th January 1930.)

The case reported is that of a man, aged 64, with negative family history, who complained of incessant cough of five days' duration which was aggravated when lying down. The Wassermann test was negative although there was a suspicious history of syphilis.

Physical examination was negative except for a distinct pulsating tumour on the right postero-lateral pharyngeal wall. During three weeks' observation the mass became considerably larger. Under local anæsthesia an external operation was performed. The right external carotid, facial, lingual and superior thyroid arteries were tied, after which there was complete collapse of the tumour mass. The patient was observed for a month, during which time there was no recurrence of the mass and no attacks of coughing. Before the operation it was

thought to be an aneurysm of the ascending pharyngeal artery, but from the operative findings it was concluded that it must have been of the ascending palatine. ANGUS A. CAMPBELL.

Surgical Diathermy in Oto-Rhinology and Laryngology. H. BOURGEOIS. (*L'Oto-Rhino-Laryngologie Internationale*, 1930.)

In this paper the author reviews the various forms in which surgical diathermy can be employed and the general advantages which diathermy holds over ordinary surgical procedures.

Regarding its regional application, he considers it the method of choice in tumours of the alæ, vestibule of the nose, and readily accessible malignant tumours of the septum. For large tumours of the nose he does not advise the use of diathermy for the primary growth, but states that it is useful for recurrences.

Congenital atresia is readily treated by diathermy.

Stenoses of the nasopharynx caused by adhesion of the palate to the posterior pharyngeal wall of a traumatic origin do well, as the scar does not tend to contract in the same way as after the knife.

The results in stenosis of specific origin are not quite so good.

The treatment of scleroma also gives good results, but the treatment may have to be repeated.

The method is especially good in cases of epulis and angiomata, because of the lack of hæmorrhage.

In carcinoma of the pharynx he advises excision with diathermy, followed by surface diathermy.

For simple hypertrophy of the tonsils, surgical removal is preferred.

For the larynx, diathermy is not to be recommended except in the epiglottis, but tuberculosis of the vocal cord gives excellent results to treatment with high frequency. (The cold spark of Heitz-Boyer.)

E. J. GILROY GLASS.

Experiments on the Etiology of Influenza. Preliminary Report. I. S. FALK, R. W. HARRISON, R. A. M'KINNEY and G. W. STUPPY (Chicago). (*Journ. Amer. Med. Assoc.*, 28th December 1929, Vol. xciii., No. 26.)

Preliminary experiments with four rhesus monkeys treated with Pfeiffer bacilli that had first been subjected to three rapid mouse passages did not result in influenza.

However a disease resembling influenza appeared in a series of sixteen rhesus and capuchin monkeys inoculated with materials obtained from eight human cases during the height of the epidemic.

In twenty-eight animals the disease resembling influenza followed only on treatment with a culture of pleomorphic streptococci isolated from the blood of an early human case.

Review of Book

Two monkeys had acute toxic reaction from a nose and throat spray of pleomorphic streptococci.

A mixed culture from the trachea of a monkey experimentally infected with these cocci produced in three monkeys a more severe infection than the pure culture itself. The addition of pneumococci intensified the reaction by producing disseminated patches of pneumonia.

In these cultures three strains were observed, and are described as "smooth," "intermediate" and "rough" types of colonies, the rough one being the most virulent.

Nose and throat sprays of these cocci produce no disease in rabbits.

Serological studies from fifty infected persons demonstrated a specific agglutinin.

The authors feel that pleomorphic streptococci were etiologically related to the influenza outbreak in 1928-29, and are similar to or identical with the organisms found in 1918-19.

ANGUS A. CAMPBELL.

REVIEW OF BOOK

The Medical Annual: A Year-Book of Treatment and Practitioner's Index. Forty-eighth year. 1930. Pp. 652. Bristol: JOHN WRIGHT & SONS, LTD. London: Simpkin Marshall, Ltd. Price 20s.

The Medical Annual affords us a varied and interesting résumé of the past year's work in the treatment of disease. Subjects of general as well as of special interest receive full and thoughtful consideration.

Diseases of the Ear, Throat and Nose receive from Mr A. J. M. Wright their usual ample attention in all their aspects. The latest points in diseases of the nasal sinuses include the use of iodised oil and X-ray examination; in those of the œsophagus the appearance of peptic ulcers of that tube and the rare condition of diverticulum at the lower end.

It is interesting to read Sir W. J. de Courcy Wheeler's reference to Zaaijer's, Torek's and Eggers' radical treatment of œsophageal cancer (p. 381). McKenzie's use of diathermy in cancer of the pharynx (p. 404), McKenty's post-operative treatment (p. 424), Thurston Holland's radiotherapy (p. 440), Harrison's extensive article on syphilis (p. 501) and Purves Stewart's Tabes Dorsalis (p. 509) are full of new ideas.

Among the "curiosities" may be noted optic atrophy following an injection of alcohol for asthma, reported by Sir Wm. Lister (p. 384);