subsided as soon as patient breathed. Slight thickening of left pyriform fossa was seen. Tumour was painted with methylene blue, and blue was seen in the pyriform fossa.

Under local anæsthesia, tumour was grasped by forceps and when extended and forcibly held up, another forceps was placed round the pedicle in the pyriform fossa and the pedicle ligatured. Unfortunately, the intensely thin wall burst and some fluid escaped with definite air bubbles.

Dr Irwin Moore said he believed this was a case of intrinsic laryngocele. The late Professor Shattock divided these air-sacs into pneumatoceles and hernias, and clinically he advised that the term laryngocele should be employed for those sacs which extended outside the larynx, and the term hernia for the intrinsic ones. He (the speaker) had found that the seat of election for intrinsic hernias of the sacculus laryngis was a weak area situated between the ventricular muscles, similar to that found in the deep pharynx in the case of diverticula.

ABSTRACTS

THE EAR.

Ocular Pain—an Indication for the Radical Mastoid Operation in Acute Middle-Ear Suppuration. By André Moulonguet. (Annales des Maladies de l'Orielle, du Larynx, etc., July 1925.)

Although first noticed by Ostmann in 1897, and later by other observers, sufficient importance has not been attached to ocular pain in this connection.

Four cases are described. In all of them, during the course of an acute otitis media, in the majority of which paracentesis had been practised two or three times—and in one case an antrotomy—a severe burning pain was complained of in the eye of the same side. There was no paralysis of orbital muscle; and no abnormality detected in the fundus of any of the cases.

Two patients died, one probably from cerebral abscess, the other from meningitis; post-mortem examination was not possible. In the other two, radical operation on the mastoid gave rapid relief to the pain and was succeeded by recovery.

The symptom cannot be satisfactorily explained, but the author is convinced of its significance, as indicating urgent need for radical operation in those cases in which antrotomy has failed to give relief.

I. B. CAVENAGH.

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On Aural Focal Sepsis as a Source of Neurasthenia and Insanity. E. WATSON-WILLIAMS, M.C., Ch.M. (Brit. Med. Journ., 4th July 1925.)

The association of aural sepsis with mental disorders, including epilepsy, is made the subject of a short historical review, from which it appears that, even seventy and fifty years ago, cases were recorded of restoration to mental health after mastoid operation.

Routine examination of the ears is advocated in all cases of mental illness, and whenever focal sepsis is being searched for, the ear should not escape notice.

T. RITCHIE RODGER.

Disease of the so-called Cephalostatic System. KARL HELLMANN, Münster-i-W. (Zeitschrift für Hals-, Nasen-, und Ohrenheilk, Band 11, heft 1, p. 107.)

The writer describes a case of vertigo and nystagmus to the right occurring in a male patient when his head lay over on its left side, while he was lying on his back. The vertigo almost disappeared when the head was brought into the natural position with the face upwards. The right internal ear was the one affected (possibly from a hæmorrhage), and the disturbance was present only when this ear was uppermost. When the whole body was turned along with the head the disturbance took place, though to a slightly lesser degree. There was spontaneous outward pointing of the right arm and distinctly diminished reaction to cold, but the reactions to rotation were in both directions normal. Hellmann considers that these signs point to a disease, of some sort or other, of the cephalostatic system (otolith apparatus). The interdependence of this system and the neckmusculature is evident.

James Dundas-Grant.

The Differential Diagnosis between Inflammatory Labyrinthitis and Otogenic Cerebellar Disease. Th. Nühsmann. (Archiv. für Ohren-, Nasen-, und Kehlkopfheilkunde, Band 43, heft 4, July 1925.)

At the Halle Clinic from 1911 to 1920, out of twenty-six cases of brain abscess, eight were cerebellar with one survival. From 1921 to 1924, out of twenty-one cases, ten were cerebellar with seven survivals. Nühsmann stresses the following diagnostic points.

In uncomplicated labyrinthitis fever is absent. Nystagmus is to the same side at first, but within a few hours destruction of the cochlear and vestibular end organs is complete, and unopposed action of the opposite labyrinth causes spontaneous nystagmus to

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the healthy side. When the head is rotated towards the sound side the patient falls forwards, instead of backwards to the diseased side as in cerebellar abscess. From the eighth to the twenty-eighth days the roof nuclei become compensated to altered conditions, and the nystagmus disappears, together with past-pointing, falling, and locomotory disturbances.

The formation of a cerebellar abscess is of necessity gradual, since rapid invasion results in generalised meningitis; and during the latent stage symptoms must be sought for. The temperature remains normal, but the pulse rate is progressively retarded. An abscess at the most common site produces outward past-pointing of the homolateral arm and wrist. The direction of falling is uninfluenced by the position of the head. High grade ataxia only occurs when the vermis becomes implicated. Nystagmus from direct irritation of Deiter's nucleus is to the same side, and coarser and of greater amplitude than that of labyrinthine origin.

The two conditions often coexist and hysteria may confuse the issue. In all doubtful cases Nühsmann counsels resort to the ultimate test; namely, that of "autopsy in vivo!" WM. OLIVER LODGE.

Otitic Intracranial Infection. H. LAWSON WHALE, M.D., F.R.C.S. (Brit. Med. Journ., 16th May 1925.)

Two cases are described in which pus was found to be present in the cerebro-spinal fluid and signs of cortical irritation were present, yet both patients got well after treatment which amounted to nothing more than simple mastoidectomy with free exposure of the dura mater.

In both, a second operation was undertaken for exploratory purposes, but no pus was found in either posterior or middle fossa.

The author emphasises the value of the two-stage operation—exposing the dura widely and postponing further exploration unless the signs give distinct encouragement to further steps. The clinical and local evidence have thus time to develop and the patient is saved the shock of a very prolonged operation.

T. RITCHIE RODGER.

Study of a Case of Oto-hydrræa following old-standing Trauma. VINCENZO PALUMBO, Pavia, Italy. (Annales des Maladies de l'Oreille, du Larynx, du Nez et du Pharynx, February 1925.)

A schoolboy suffered from a fracture of the base of the skull, the result of being knocked down by a wagon. The immediate consequences of the accident passed off in about two months, and for a month afterwards the boy enjoyed good health. At this point,

however, he began to complain of severe headache with tinnitus in the right ear, vertigo, and nausea. This persisted for about three or four days, when, after a cracking noise in the right ear, an abundant flow of clear fluid was established from the ear. The subjective symptoms disappeared after this; the otorrhœa stopped in about two days, after which the boy enjoyed normal health for several months, at the end of which time the same syndrome presented itself. For two years this sequence persisted, with a crisis every two or three months.

At the end of two years, the recorder examined the patient. The superior wall of the right external auditory canal sagged into the lumen of the meatus, but was not inflamed; the sagging obscured the view of the upper half of the membrane, but the lower half was intact and apparently normal. Hearing in the right ear was much reduced, and the vestibule did not appear to function. The point of exit of the fluid was not apparent, and the patient was requested to be brought back at the onset of the next crisis. He returned in forty days, complaining of severe headache, with spontaneous nystagmus, vertigo, and right earache. After twenty-four hours the flow of clear fluid was established; it was found to be cerebrospinal fluid, the point of emergence being at the junction of the membrane and the superior meatal wall.

A hernia of the meninges was diagnosed, and surgical intervention was suggested, but this was refused by the parents. For more than a year, the patient was not seen by the recorder, but during a crisis at the end of that time, evidence of meningitis was found, several hours after the discharge commenced. The patient died, and post-mortem examination was refused.

Gavin Young.

THE PHARYNX.

A Contribution to the Anatomy of the Tonsil Capsule. F. MARX. (Zeitschrift für Laryngologie, Rhinologie, etc., July 1925.)

It is difficult to give up the conception of a definite capsule for the tonsil. Everyone agrees that the tonsil does not possess a capsule in the same sense as, for instance, the spleen or the kidney. During the sixth month of fœtal life an infolding of the mucosa occurs in the region of the second internal cleft. In these folds lymphocytes become deposited and develop into lymph nodes which freely permeate the stratified epithelium. The infolding mucous membrane which grows laterally, pushes before it the strong inner fascia of the buccopharyngeus or superior constrictor muscle of the pharynx. This fascia we later recognise as the glistening white

The Pharynx

"capsule" of the tonsil. If the tonsil in the region of the supratonsillar fossa also grows medially, the invaginated muscle sheath is pushed medially, and sections in this region may show tonsil tissue completely surrounded by a capsule.

Small tonsils where this outward development has not occurred show a corresponding absence of "capsule." The so-called enucleation operation means that a piece of the inner fascia of the superior constrictor muscle is removed with the tonsil, to which it is firmly adherent.

J. KEEN.

Tonsillectomy in Peritonsillar Infections. G. Völger. (Zeitschrift für Laryngologie, Rhinologie, etc., July 1925.)

Dr Völger argues in a very convincing manner in favour of the radical procedure as soon as a diagnosis of peritonsillar abscess has been made or even before abscess formation.

- (1) The difficulty of the operation has been much exaggerated. After injection of novocain into the areas surrounding the abscess, the trismus disappears, as the spasm of the jaw muscles is only a reflex contraction to avoid pain.
- (2) The main objection to this procedure has always been that new lymph and blood channels are opened up to infection. The same objection applies to any incision, especially if there be much probing afterwards with blunt-pointed forceps and repeated squeezing of the abscess to remove pus. No surgeon hesitates to do a laparotomy or to remove an appendix because peritonitis is already established. The analogy does not seem so far-fetched as it appears at first sight. Both tonsil and appendix are collections of lymphoid tissue.
- (3) The dangers of peritonsillar sepsis are frequently underestimated. In recent literature Völger has been able to find eight detailed records of fatal cases; three died from sepsis, two from thrombosis of the cavernous sinus, three from secondary hæmorrhage.
- (4) Removal of the upper pole alone, according to Völger, is already a recognised surgical measure. Complete enucleation is only a small step further; it leaves a comparatively small fresh wound surface where the lower pole is attached, the remainder being already detached by the abscess formation. Further, pocketing of the abscess behind the lower pole is then impossible. The operation is said to be easier than the dissection of a septic tonsil during the quiescent stage, as the greater part of the tonsil lies already loose in a bed of pus. Drainage of the abscess is perfect and no further interference is required.
- (5) Recovery from this operation is said to be more rapid than recovery from a tonsil dissection in the quiescent stage, and the patient is spared a second operation at a later date.

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- (6) The admitted disadvantages are:-
- (a) A somewhat greater tendency to hæmorrhage, which was always easily controlled in the author's cases, as soon as the tonsil is removed and the abscess has emptied itself. But even simple incision is not free from danger in this respect. Several cases of death from hæmorrhage after simple incision of a peritonsillar abscess have been reported.
 - (b) The patients have already had several days' illness with great pain. In consequence they are rather restless, and sometimes difficult to deal with, when performing this operation under local anæsthesia.

These theoretical considerations are largely confirmed by clinical observations. In sixteen cases dealt with in the way described, the evening temperature after the operation never rose above 37.3° C. With these sixteen are compared a series of forty-five cases of peritonsillar abscess where only one incision was made; thirty-seven of these were running temperatures before the operation; after the incision only twelve remained entirely free from fever; the remaining twenty-five continued to have fever up to 39° C. during the next few days.

J. Keen.

A Fatal Complication of Peritonsillar Abscess. O. Steurer. (Zeitschrift für Laryngologie, Rhinologie, etc., July 1925.)

It is interesting to find in the same number of the Zeitschrift the record of a fatal case, where the treatment adopted was the more usual one, viz., repeated incisions of the peritonsillar abscess. The patient, a man aged 23, died on the 15th day of his illness from a very severe generalised sepsis. The infection, spreading from the peritonsillar region, first reached the parotid gland and the tissues of the cheek, where pus had to be let out. Then a thrombophlebitis of the internal jugular vein followed and metastatic abscesses occurred. The post-mortem showed a breaking-down mural clot in the interior of the jugular vein, near its junction with the subclavian. From the outside the walls of the vein appeared quite healthy. Thrombosis of the jugular vein generally occurs through contact infection of a suppurating lymph gland. The explanation which the author gives in this instance is thrombosis of a small tributary vein with an ingrowing thrombus. It would have been quite useless to tie the jugular vein, as a clot so low down in the neck would not have been suspected. The author attaches great importance to the swelling of the parotid gland as a clinical sign that the peritonsillar inflammation is spreading, and that it may reach the connective tissue space which contains the large vessels of the neck. I. KEEN.

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The Operative Treatment of Diseased Tonsils and Adenoids. JOHN R. GRIFFIN, Ch.B., F.R.C.S. (Practitioner, August 1925.)

The author describes very clearly and with the aid of good diagrams the method of tonsil dissection introduced by Waugh. He now uses this operation in all cases—children and adults. He does not stitch the faucial pillars in every case, fearing angulation of the palate. For the removal of adenoids he uses the La Force adenotome, and makes a point of leaving this in position two minutes before removing it with its contents. The author claims that his results both from a functional and anatomical point of view are much better than he used to obtain by the guillotine.

T. RITCHIE RODGER.

Tonsillectomy by Propulsion and Avulsion. J. Bowring Horgan, M.B., Ch.B., D.L.O. (Practitioner, August 1925.)

This is a good description of the method of removing tonsils by the blunt guillotine. The author claims that if by this method complete enucleation can be obtained, it is preferable to dissection as being an operation much less severe and prolonged. He says that "it is possible in this way to remove all varieties of diseased tonsils at all ages, in the shortest time, and with the least possible risk of either primary or secondary hæmorrhage." The details of his own positions and manipulations are clearly described. He emphasises the bluntness of the blade and claims that the avulsion of the tonsil with consequent clamping of vessels as contrasted with cutting of them, explains the very slight loss of blood. The very soft type of tonsil sometimes presents a difficulty, but this is even more true in the case of dissection.

T. RITCHIE RODGER.

THE LARYNX.

The Healing Action of Light in Tuberculosis of the Larynx. H. Leicher. (Zeitschrift für Laryngologie, Rhinologie, etc., July 1925.)

The beneficial action of the ultraviolet rays of the sun, or of artificial sources of light, in tuberculous lesions has been recognised empirically for a long time, but even to-day we find only rare attempts to explain this action scientifically.

Prolonged exposure to ultraviolet rays does not influence the toxicity of the various forms of tuberculin, and the idea of a specific action of sunlight in attenuating or destroying the virulence of tubercle bacilli and their toxic products, has been abandoned many years ago. The author, here, attacks the problem by considering certain biochemical, non-specific reactions which occur in the blood

after the application of various therapeutic agents ("Reiztherapie") e.g. exposure to X-rays, injections of foreign proteins or colloids, although, speaking generally, the light bath is the most powerful of these. Even tuberculin must be considered as belonging to this group, as it only partially acts in virtue of its specific nature.

Certain changes can be found in the blood of tuberculous patients, but similar changes are discoverable in patients with new growths, in pregnancy, and also in many cases of otosclerosis. It will suffice to mention a few of these chemical changes, in order to show the scope of this paper.

- (1) An increase in the proportion of the *globulin* over the albumin group of proteins. In these cases the serum proteins are therefore more easily precipitated by the usual methods (heat, half-saturated ammonium sulphate, concentrated salt solution) than in the case of normal individuals.
- (2) An increase in the *cholesterin* content of the blood; this is also observed in cases of ordinary septic infections and seems to be an expression of greater resistance of the organism against infections of all kinds.
- (3) A diminution of the calcium content of the blood. This stands in direct relation to the protein changes, as the globulins contain less calcium than the albumins.

In a second chapter it is shown that ultraviolet rays—and to some extent also the other agents—tend to produce changes in the circulating blood similar to those which have already been described as existing in the blood of tuberculous patients, viz., an increase of globulin and cholesterin and a diminution of calcium. As an additional and very constant sign of the action of ultraviolet rays, we see in the blood picture an increase of the eosin staining polymorphs, i.e., an eosinophilia.

In a third chapter the author studies the reactions in the blood serum of tuberculous patients after exposure to light baths. Theoretically one might expect a further departure from the normal in the same main directions. This is confirmed in the majority of cases. It can also be shown that these changes in the chemical blood reactions, as a rule, accompany a gradual change for the better in the clinical picture.

Dr Leicher therefore concludes that these non-specific blood reactions which he describes are in the nature of defence reactions; and we can stimulate them by means of light therapy, and to a lesser extent by the injections of suitable foreign proteins or colloids.

The connection of this discussion with laryngology is a little remote. However, a special section is devoted to a theoretical consideration of work done in Vienna by Cemach and Wessely,

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who advocate the direct application of light to the tuberculous larynx through suitable apparatus (suspension or directoscope). An important physical law states that the intensity of light rays falling on a flat surface is proportional to the cosine of the angle of incidence. This very marked difference in the strength of light action is easily shown on a cylindrical body, e.g. an arm. The parts, on which the rays of an artificial source of light fall at right angles, may show an intense erythema, while no reddening occurs in other parts lying quite near where the incidence of the rays is more tangential.

For purposes of experiment the larynx of a dog was exposed directly to the rays of a strong source of light and the animal was killed after fourteen hours. As was expected, according to the cosine law, only those parts showed a reaction where the incidence of the light rays was at right angles or nearly so, viz., the upper margin of the posterior commissure, the upper surfaces of the arytenoids and of the vocal cords. A really local effect, as such, can hardly be expected. If good results are reported from the direct exposure of the diseased larynx to light, this is probably only an indirect effect of the general reaction to the ultraviolet rays which can be obtained equally well and very much more easily by a general light bath.

J. KEEN.

Frazier's Operation for Recurrent Laryngeal Paralysis. Dr Georges Portmann. (Revue de Laryngologie, January 1925.)

In an article descriptive of a tour of various medical centres in the United States, Portmann gives an account of an operation on the right recurrent laryngeal nerve which he saw performed by Dr Frazier, Professor of Clinical Surgery in the University of Pennsylvania. The peripheral end of the recurrent nerve was united to the descendens noni branch of the hypoglossal. The inferior laryngeal is to be sought beneath the upper pole of the lateral lobe of the thyroid gland at the lower border of the insertion of the inferior constrictor of the pharynx into the inferior cornu of the thyroid cartilage. At this point it divides into two branches, the laryngeal branch and the branch to the inferior constrictor. A straight end-to-end anastomosis by perineural suture was performed. Entire absence of tension on the sutures uniting the nerves is, of course, essential.

A preliminary tracheotomy is necessary in most cases. In order to remove the operation field as far as possible from the tracheotomy wound, the incision is made well back along the anterior border of the sterno-mastoid.

Professor Frazier usually finds it necessary to make absolutely certain of the diagnosis of recurrent paralysis, as distinct from fixation of the crico-arytenoid joint, by direct inspection of the

larynx, and testing the mobility of the arytenoid with a probe. A considerable number of these operations have been performed, and the satisfactory results obtained are confirmed by Chevalier Jackson.

G. WILKINSON.

Intrathoracic Goitre. ALFRED H. NOEHREN, M.D., F.A.C.S., Buffalo, N.Y. (American Journal of Surgery, August 1925.)

This condition should be suspected in all cases presenting symptoms of pressure in the mediastinum. In about 7 to 18 per cent. of all goitres, part of the thyroid is in the mediastinum. The mechanism by which the goitre becomes intrathoracic is explained on anatomical and physiological grounds. The thyroid hangs suspended by vessels at its upper poles and by its attachments to the thyroid and cricoid cartilages and the trachea. favoured by gravity and the up-and-down movements of swallowing. The prethyroid muscles direct any developing thyroid tumour or goitre into the mediastinum, the upper end of which is open and offers but slight resistance, excepting by its small size. The goitre once through the opening grows downwards into the mediastinum and draws the rest of the thyroid lobe with it. The so-called diving goitres are often forced out of the mediastinum at the pleasure of the patient. They may cause sudden dangerous symptoms by becoming incarcerated at the opening. Symptoms are almost entirely due to pressure. X-ray examinations are of great help and should always be employed. The shadow may persist after removal of the goitre, and this is due to the cavity (which is surrounded by a capsule) becoming filled quickly by fibrous and areolar tissue. The only treatment is surgical. Local anæsthesia is preferred. X-ray treatment is uncertain NICOL RANKIN. and not without danger.

REVIEW OF BOOK

Handbuch der Hals-, Nasen-, und Ohrenheilkunde. Edited by Drs A. Denker of Halle, and O. Kahler of Freiburg. Julius Springer, Berlin.

Volume 1.—This volume represents the first instalment of a publication of apparently nine similar volumes—most modestly described as a "Handbook." In its compilation, over 100 writers have conspired in the attempt to assemble and offer a complete and up-to-date account of all pertaining to our specialty. From this volume one would conclude that the ambitious effort has been eminently successful, and, though the whole series must