viscid as a result of evaporation, and the deafness was correspondingly increased.

He had obtained benefit in his cases from ionisation of the external auditory meatus, but ionisation of the Eustachian tubes often yielded excellent results.

Mr Watson-Williams had drawn attention to the calcium metabolism in otosclerosis. The blood-clotting time had been taken in a considerable number of these cases by himself and others, and it might be of interest to mention that this was found to be raised and also that there was as a rule an increase in the calcium content of the blood. The general administration of ultra-violet light had, in some cases, improved the calcium content and the clotting-time, but although this was evidence that there was some alteration in the calcium metabolism there was some difficulty in arriving at the nature of this alteration.

In cases of chronic deafness the chief difficulty appeared to be to find out which cases were in the period of curability and which had passed this period, for the clinical signs and symptoms were very similar in both groups and at present there existed no criterion, in cases of chronic deafness, as to which cases were likely to be cured.

ABSTRACTS

EAR.

Morphological Changes in the Inner Ear caused by the Abnormal Positions of the Fœtus in Utero. A. PRECECHTEL (Prague). (*Zentralblatt f. Hals-, Nasen-, und Ohrenheilkunde*, 1928, Vol. xiii.)

In this paper the author discusses the possibility of the development of anatomical and pathological abnormalities in the internal ear and central nervous system secondary to the persistence of abnormal positions during intrauterine life.

(*Note.*—It is hoped that a more detailed abstract of this important paper will be obtained later.)

The Author's Electric Audiometer. R. MIÈGEVILLE (Paris). (*Zentralblatt f. Hals-, Nasen-, und Ohrenheilkunde*, 1928, Vol. xiii.)

The apparatus was first described in 1922, and has ever since then been used for the exact determination of auditory acuity. It consists of a generator of electrical waves, of which the frequency and intensity can be regulated, thereby producing pure audible

sounds of higher and lower pitch. By this means a graphic representation ("Audiogram") approximating the physiological curve may be traced. The receiver for the patient's ear is of a special type by which all harmonics are eliminated. By means of this instrument it is possible quickly to obtain a constant record of the degree of deafness, to work out all the hearing tests, either "reciprocal" or of distance for the detection of malingering, and to make the usual complete examination of the hearing.

Variations in the Cell Content of Different Portions of Cerebro-spinal Fluid in Conditions of Otogenic Meningeal Irritation. A. WESTERGAARD (Kemmune hospitalets, Copenhagen). (*Archiv. f. Ohren*, etc., 1929, Bd. cxx.)

With patients suffering from otogenic intercranial complications the following proceeding with regard to lumbar puncture was used. The spinal fluid (15 to 30 cm.^{3}) was collected in a series of glasses, in each of which the cells were counted. The results obtained were recorded graphically in curves. An ascending curve indicates a greater number of cells in the last portion of the spinal fluid than in the first. A descending curve, on the contrary, indicates a greater quantity of cells in the first portion.

The investigations are based on the following theoretical considerations. Meningeal affection arising from the ear is, at all events at first, confined to the cranial cavity alone. At the commencement of the process the white corpuscles are only present in the vicinity of the focus but they spread by degrees to the whole subarachnoid space. As long as the process in the cranial cavity is on the up-grade, the number of white corpuscles in the vicinity of the focus will be greater than in the more remote parts of the subarachnoid space. When the spinal fluid is collected in a series of glasses, the greater quantity of cells will be found in the later portions. On the contrary, the quantity of cells in the vicinity of focus diminish rapidly when the process in the cranial cavity is on the down-grade, and consequently the above described procedure will show the greater number of cells in the first portion of the spinal fluid.

The investigations confirm the correctness of the theoretical surmises. Details will be given in a future, more extensive work. As a résumé of the investigations the following may be stated:—

I. In otogenic meningeal affections the pleocytosis often varies greatly in different portions of the spinal fluid evacuated by a single lumbar puncture. It can at times be observed macroscopically.

II. These variations in the pleocytosis are not to be regarded as accidental, but are due to the increase or decrease of the meningeal

infection above described and, consequently, they are of clinical importance.

III. Ascending curves indicate an increase of the meningeal process, descending curves a decrease of the same. The slope of the curves is the measure of the rapidity with which the process increases or decreases.

This proceeding often gives a foundation for diagnosis, prognosis, and treatment in cases where the ordinary methods are useless. As examples may be quoted :—

(1) Male, age 23. Otit. med. supp. et mastoiditis acute in chron. Radical operation. Lumbar puncture at operation gave 744/3 cells (only one portion examined). Three days later lumbar puncture gave a descending curve with 2754/3 cells in the first and 2006/3 in the last portion. The average was 2240/3. If the cells had been counted in only one portion of the spinal fluid, the supposition would have been that the meningeal affection was increasing, as it would only have appeared that the number of cells had increased from 744/3 to at least 2006/3. The curve however showed the opposite, which the course of the disease confirmed.

(2) Male, age 12. Otit. med. supp. et mastoiditis acut. in chron. Sepsis. Sinusphlebitis and abscessus perisinuosus. Radical operation. Lumbar puncture in connection with operation gave a horizontal curve with an average of 27/3 cells. The septic condition grew rapidly worse and he died two days after operation. Shortly before decease meningeal symptoms developed. A fresh lumbar puncture gave a horizontal curve with an average of 452/3 cells. As the number of cells had increased so greatly, it would, according to the usual opinion, be supposed that a meningitis was beginning to develop. Were this correct the curve should have been ascending. A horizontal or descending curve in such cases argues against a non-complicated meningitis. We drew the conclusion that the pleocytosis was due to the affection of the sinus, which conclusion was confirmed by *the post-mortem examination.*

IV. As the pleocytosis often varies so much in the different lots of lumbar fluid, the content of cells cannot be determined by a fixed cipher.

V. To judge the pleocytosis it is not, therefore, sufficient to examine a single chance portion of spinal fluid, as is usually done. In any case the first and last portion should be examined.

Author's abstract *per* Dr S. H. MYGIND.

Ear

Fibroma arising from the Jugular Bulb and Invading the Middle Ear and External Auditory Canal. Dr G. W. MacKenzie. (*Laryngoscope*, Vol. xxxviii., No. 4, p. 232.)

A female, aged 18 years, was seen with a history of impairment of hearing in the right ear only; there was ringing in the right ear, slight discomfort at times in the jaw and lower part of the throat, no vertigo. The right tympanic membrane was intact, opaque, and retracted. Two months later a small red swelling, not unlike a polyp, was seen in the depth of the auditory canal, at the level of, or slightly lateral to, the plane of the drum. A small crescent of the drum could be seen above the swelling. X-ray of both mastoids showed normal pneumatic mastoid processes. There was a right-sided, middle-ear deafness; the case was kept under observation for some months. About four years after she was first seen, the patient reported slight hæmorrhage from the right ear. The growth was evidently larger and felt like a fibrous polyp when probed; a small piece was removed for pathological examination, profuse hæmorrhage occurred and the ear required packing. Tests of the labyrinth indicated no involvement of the inner ear. A radical mastoid operation was done—mastoid cells contained no pus but there was a peculiar greenish discoloration of the mucous membrane lining them. The bone appeared to be normal. A cyst-like growth with a small unpolished surface was seen running along the auditory canal. The mass was easily separated from the surrounding walls, except at the lower margin of the annulus tympanicus. The tumour rested on the blue, smooth surface of the jugular bulb. On removal with a snare copious venous bleeding occurred. Hæmorrhage was controlled by packing. Healing was complete when the patient was examined six months later, and hearing was better than before the operation. The pathologist reported a connective tissue tumour with intact epithelial covering. It might have been a sarcoma but general appearance suggested benign growth.

The case is of interest owing to the dehiscence in the floor of the tympanic cavity, the hema-siderotic staining of the mucous membrane of the mastoid, and the slow growth of the fibroma.

ANDREW CAMPBELL.

Methods of Examination of the Vestibular Organ. Professor Quix. (*Archives de Laryngologie*, February 1929.)

The functional investigation of the labyrinth has hitherto been mainly confined to the horizontal semicircular canal. The functions of the cristæ of the two vertical canals and those of the maculæ have not been adequately studied. Whereas, each of these sensory elements has its specific function.

Abstracts

The vestibular apparatus consists of two organs:—

(1) The semicircular canals which regulate equilibrium during movements of rotation of the body. (2) The otoliths which regulate equilibrium in positions of the body.

The anatomy and physiology of the semicircular canal system is first discussed. The author next proceeds to discuss the "shunting" system of vestibular reflexes, *i.e.* the manner by which various parts of the body can maintain equilibrium independently of impressions from the labyrinth. A detailed account of past-pointing is given, with the author's method of measuring and recording same.

In opposition to the accepted statement that simultaneous stimulation of both labyrinths produces no vestibular response, the author, employing his irrigation instrument the "statokinetre," has shown that both nystagmus and past-pointing result. If, for instance, both ears are simultaneously irrigated with cold water, nystagmus is produced to the right on looking to the right, and to the left on looking to the left.

The otolith system is next considered. The lapilli act as stabilisers of equilibrium when body rotation takes place around a bitemporal axis. The sagittæ act as stabilisers of equilibrium during rotation around the sagittal axis.

The author concludes his somewhat technical paper by recognising the difficulty for students in understanding the points under discussion. The paper is made easier to follow by the help of tables and diagrams.

MICHAEL VLASTO.

Peripheral Facial Palsy in Otology. A. SARGNON and P. BERTEIN. (*Archives de Laryngologie*, January 1929.)

This lengthy paper is introduced by a detailed account of the anatomy and physiology of the facial nerve in which MacKenzie's work finds mention. Special stress is laid on the distribution of the sensory fibres of the nerve. The article proceeds to a clinical study of the motor, sensory, and sympathetic disturbances in peripheral palsy of otitic origin.

Facial paresis is usually first noticed in the lower half of the face and may be confined to this area. It is remarked that observation carried out from behind the patient may show a slight projection of the auricle due to paralysis of the extrinsic muscles of the ear.

Whilst noting the frequency of pain associated with paresis, the author does not share the view that the degree of pain is of any prognostic significance.

In diagnosing between a supranuclear and a peripheral palsy, the custom is to state that in the former the upper face escapes. This is not the case. The upper face is always paralysed in facial nerve

palsy, but more so when the paresis is peripheral. Other points of differentiation are that in supranuclear lesions: (1) The associated movements of the face are present. (2) The blinking reflex is retained. (3) There is no reaction of degeneration in the affected muscles and late contracture is of rare occurrence. There follows a differential diagnosis of the site of the facial nerve lesion.

The bulk of the paper is devoted to the study of facial paralysis resulting from affections of the external, middle, and internal ear. Chapters are also devoted to traumatic and congenital paralysis and to that caused by tumours.

A full bibliography is appended. MICHAEL VLASTO.

Differential Jugular Blood Cultures in Sinus Thrombosis. REUBEN OTTENBERG, M.D., New York. (*Journ. Amer. Med. Assoc.*, 17th November 1928, Vol. xci., No. 20.)

Since his preliminary report in 1927, the author has collected eleven more cases, making fifteen in all. The procedure consists in aspirating blood from the two internal jugular veins simultaneously, carefully plating it out in petri dishes of nutrient agar, and comparing the number of colonies of bacteria per cubic centimetre of blood obtained from the two sides. In a case of otitic infection a very marked difference in the number of the micro-organisms in the two sides is regarded as evidence of thrombus on one lateral sinus. In four cases the larger number was found in the vein of the healthy side. The author suggests that this may be due to the reversal of the blood current due to obstruction from the thrombus. His experience has shown that a thrombus rarely extends beyond the jugular bulb, while the spread upwards in the lateral sinus has no limit. He also states that the bacteria are either killed or removed from the circulating blood with great rapidity. He considers the procedure simple and safe.

The article is illustrated by tables and diagrams.

ANGUS A. CAMPBELL.

X-ray Investigation in Cholesteatoma. By J. BERBERICH. (*Zeitschrift für Laryngologie, Rhinologie, etc.*, Band xviii., April 1929, pp. 119-121.)

In recent years Ruttin and Albrecht have recommended the instillation of iodipin in order to demonstrate the extent of cholesteatoma cavities, when an X-ray photograph of the temporal bone is made. One of the main disadvantages of this method is the *oily* consistency of the iodipin which does not allow it to diffuse very readily. The patient has to remain lying down on the opposite side

for six hours. Berberich therefore gave up iodipin in X-raying for mastoid disease, and instead he uses a 50 per cent. solution of strontium iodide. This is a *watery* solution which penetrates readily and quickly into the middle ear and its recesses, and the X-ray photographs are equally successful. J. A. KEEN.

Estado Actual de la Anatomia y Fisiologia del Nervio Vestibular. R. LORENTE DE NO. (*Revista Espanola y Americana de Laringologia.* Ano xx. (1929), No. 3, March, p. 97.)

The author's experiments on ocular reflexes were made on rabbits. The animal is placed on a turning-table to which an apparatus for recording the movements of the ocular muscles is fixed. It is only possible to place the animal in five distinct fundamental positions on the table in relation to the axis of rotation. Any other would merely be a combination of two of these. These five positions are represented in a diagram as corresponding to the centre and four cardinal points of the compass, the head being always directed to the north. In ordinary existence only three of these positions would represent physiological movements. In the experiments it is shown that rotatory nystagmus is much more violent in the positions corresponding to physiological movements, and that in movements which are not physiological, that is, which do not occur in ordinary existence, nystagmus may even fail to appear altogether. In rotation in the first position, that is when the head of the animal is in the axis of rotation of the table, rotatory nystagmus is of equal duration, frequency, and amplitude with post-rotatory nystagmus. In the excentric positions, rotatory nystagmus is of less duration than post-rotatory. Further, both of these are less than when the position of the head is central. There is one exception to this, namely when the head is in the second position (south), which is the one which represents the usual physiological turning movements. The effect in this case depends on the length of the radius between the axis of the turning-table and the head of the animal. If it is 10 or 12 centimetres, rotatory nystagmus exceeds post-rotatory. As the radius is increased, the difference is diminished, and when the head is 40 centimetres from the axis of rotation, they become equal. When the radius is more than 40 centimetres rotatory nystagmus is less than post-rotatory. The most frequent movement of the head under physiological conditions is precisely that of position number two with a radius of 10 centimetres, and if, further, the fact is taken into consideration that post-rotatory nystagmus is not physiological, the following law is established:—

"The vestibular apparatus, including in that the labyrinth and its central connections, is adapted in its functions to the conditions in

which it works physiologically, giving rise to reactions the more intense in proportion as the excitations employed approximate to those which occur during the life of the animal. If the excitation is quite unphysiological, for instance rotation in the fifth position (north) with a wide radius from the centre of rotation, rotatory nystagmus may fail to appear altogether."

This law demonstrates the insufficiency of the present theories of the action of the labyrinth, and show that the physiology of this organ is much more complicated than is usually believed. L. COLLEDGE.

Estado Actual de la Anatomia y Fisiologia del Nervio Vestibular. R. LORENTE DE NO. (*Revista Espanola y Americana de Laringologia.* Ano. xx. (1929), No. 4, April 1929, p. 145.

A further experimental study has shown that nystagmus can be modified so that, during rotation round a central axis, it can acquire characters similar to that produced during excentric rotation. During central rotation an angular acceleration only is acting, whilst during the excentric rotation there are three types of acceleration, angular, centripetal, and linear. In this work it has been demonstrated that centrifugal force gives rise to reflexes which are a mixture of tonic reflexes and reflexes of progressive acceleration.

The purpose of physiology is not only the analysis of a function dismembered into its elements which are only seen in artificial conditions, but it is also to synthesise the data obtained experimentally in order to reach an exact conception of the function in question. This is a principle, frequently forgotten, which has not been applied to the study of the labyrinth. In recent years Magnus and Quix and their collaborators have divided the function of the labyrinth into a large number of different reflexes, which they have regarded as the functional elements and have attributed to specific parts of the labyrinth or their centres the faculty of producing them. It is to be hoped that this epoch of analysis will be followed by one of synthesis.

L. COLLEDGE.

The Treatment of Middle-Ear Suppuration by Ionisation. J. D. M'LAGGAN. (*Lancet*, 1929, i.)

The author discusses the advantages and disadvantages of ionisation. The contra-indications appear to be summed up in four sentences:—

(1) The presence of acute inflammation.
(2) Marked involvement of the structures in the mastoid process.
(3) The presence of manifest cholesteatomata.
(4) A history of vertigo, with or without the presence of the fistula sign.

The advantages are:—

That the treatment is easy for the specialist and takes but little time; no bad results occur when the experience which knows when to reject unsuitable cases has been gained; it can be used for children as young as four years; it abolishes inefficient home treatment and the unsatisfactory method of "drops." In 30.3 per cent. of cases ionisation is successful, a percentage greatly increased by careful selection of cases.

The author admits that ionisation does not solve "the problem of the treatment of all chronically discharging ears."

MACLEOD YEARSLEY.

Tinnitus Aurium: Its Incidence in Endocrine Disorders. DANA W. DRURY, M.D. (Boston). (*Journ. Amer. Med. Assoc.*, 17th November 1928, Vol. xci., No. 20.)

Tinnitus aurium may be caused by any tympanic or labyrinthine disease. High-pitched tinnitus indicates increased tension in the middle ear. Low-pitched tinnitus indicates a vascular or muscular disturbance. If pulsating, it is due to arterial congestion in the middle ear or labyrinth and, if relieved by pressure on the carotid artery, congestion is in the middle ear. Deep humming which is lessened in the recumbent position or on taking food is due to anæmia. Crackling, rattling, and gurgling sounds suggest exudate in the middle ear. Noises are often the result of toxins in the general circulation and are especially annoying in neurasthenic patients.

An analysis is made of 1000 consecutive cases received at the Evans Memorial Hospital. Of these 585 had endocrine derangement, 415 gave no evidence of it. The incidence of tinnitus is not widely different in the two groups so that the writer feels it is not a characteristic symptom in ductless gland disease. Treatment is unfavourable when the noises are continuous but favourable when they vary in intensity and are relieved by inflations.

In a former study of vertigo in endocrine disorders, almost the same observations were made, namely, 26 per cent., and while tinnitus bears a relationship to vertigo of three to one, practically all patients with vertigo also complain of tinnitus. ANGUS A. CAMPBELL.

The Causes of Death in Mastoiditis. O. JASON DIXON, M.D. (Kansas City, Mo.). (*Journ. Amer. Med. Assoc.*, 27th October 1928, Vol. xci., No. 17.)

An analysis is made of a series of 416 cases of mastoiditis seen in the Kansas City Hospitals in the past five years. There were twenty-six deaths, making a general mortality rate of 6.25 per cent. In the series were several infants with gastro-enteritis, amongst whom the

mortality rate was particularly high. Among the causes of death were: meningitis 42 per cent., pneumonia 25 per cent., brain abscess 16 per cent., sinus thrombosis 13 per cent., and post-operative shock 3 per cent. He states that gastro-enteritis in infants has not yet been proved to be a cause of death in mastoiditis. ANGUS A. CAMPBELL.

A Discussion on the Part played by the Supra-Vestibular Connection in Decerebrate Rigidity. L. J. J. MUSKENS (Amsterdam) (*Journal of Physiology*, 1928, Vol. lxiv., pp. 303-317.)

Although decerebrate rigidity has always been regarded as a release phenomenon in which severence of prosencephalon from mesencephalon was an essential feature, complete proof of this has hitherto been lacking. It was originally believed that the cerebellum had no influence on the condition; now it is generally admitted that the anterior cerebellar lobe at any rate, has some effect.

Complete decerebrate rigidity ensues only if those vestibular connections, lesion of which causes vertical forced movements, are severed on both sides. Apart from this factor is hæmorrhage into the truncus cerebri, which may cause flexion rigidity (Weed). Ken Kure believes that hæmorrhage is a necessary condition, but Bazett and Penfield's results are against this. Magnus and de Kleyn have shown that the condition of decerebrate rigidity varies considerably with the position of the animal at any time.

The author points out the importance of differentiating between two classes of case: (*a*) Those showing complete immobility with opisthotonos; (*b*) those with increased tonicity on one side, in which the power of locomotion is preserved.

Redemaker believes that injury to the red nucleus and the bundle of Monakow are the principal factors. Muskens holds that this is not so, but admits that there is no case of genuine decerebrate rigidity yet examined in which the bundle of Monakow has escaped degeneration. Cajal, Van Gehuchten, and others have demonstrated the existence of nuclei about the posterior commissure which have been proved to have particular importance in relation to forced movements. These are now known to be relay centres for the ascending vestibular connections. From these nuclei a small number of descending fibres pass to the posterior longitudinal bundle. This group of fibres is recognised in the most primitive vertebrates. It is in this position that Mauthnerz's fibre is found, and it is known that the fibres of this bundle are the first to acquire a medullary sheath.

It is known that decerebrate rigidity is inhibited by stimulation of the palæo-cerebellum. It is necessary to distinguish between the function of n. fastigii (vestibular) and that n. dentatus (cerebellar). The mid-lobe cortex may serve as a relay station for both. To analyse

the influence of the cerebellum on decerebrate rigidity four factors must be considered:—

(*a*) Spino-cerebellar tracts of Gower and Flechsig carrying proprioceptive impulses to those regions of cerebellum which, when faradised, produce increased muscle tone. (*b*) A secondary vestibular bundle from n. fastigii to the n. anterior of the thalamus. The exact position of this bundle is uncertain. Van Gehuchten is not convinced of its existence. (*c*) The Tractus dentato-rubralis. (*d.*) That part of the brachium conjunctivum made up of descending fibres from the basal longitudinal bundle.

Summary.

1. Forced movements backward in the vertical plane, whether caused by lesion of the primary vestibular centre, by section of the ascending secondary connections, by lesion of the supranuclear centres near the posterior commissure, or its palæo-striatal connection, are probably always associated with a certain amount of rigidity, recalling Sherrington's "Composite postural-reflex, the anti-gravity muscles counteracting the superincumbent weight."

2 From different observations it is seen that there is a complete reversal of physiological effect at the level of the posterior commissure.

(*a*) In a series of oral to caudal hemisections across the brain-stem of a quadruped temporary rigidity, homo- and hetero-lateral, is noted.

(*b*) If an incision is made in the region of the posterior longitudinal bundle forced movements in the frontal and horizontal plane are directed reversely, accordingly as the incision is on the caudal or oral side of the commissure.

(*c*) The same complete reversal is observed after faradic stimulation of the same region, when oral-caudal sections are made through the brain of primates.

3. Since section of the pyramidal tract has probably nothing to do with the origin of decerebrate rigidity, and as the n. ruber is frequently found intact, the part played by the supravestibular connections in the productions of the phenomenon may be supposed to be considerable. This applies especially to the ascending and descending bundles, lesion of which is associated with forced movements in the vertical plane. F. W. Watkyn-Thomas.

The Function of the Stapedius Muscle in Man. Lüscher, E. (Berne). (*Zeitschrift für Hals-, Nasen-, und Ohrenheilkunde*) Band xxiii, Heft 2, p. 105.)

Lüscher had the opportunity of observing the stapedius by means of his aural microscope in a case of a large perforation in the posterior half of the tympanic membrane caused by a blow on the ear. He saw

distinct contraction following exposure to sounds in general. These were more marked for noises than for pure musical tones, the latter having to lie between 90 and 14,000 double vibrations and to be of a certain intensity. Expectation of the occurrence of a noise also causes contraction. Contrary to some old teaching, no contraction of the stapedius accompanies strong voluntary contraction of the facial muscles. There seems every certainty that the stapedius acts as a protective mechanism against injury from exposure to loud sounds.

JAMES DUNDAS-GRANT.

Mobilisation of the Auditory Ossicles for the Improvement of Hearing. M. SCHIRMUNSKY (Leningrad). (*Zeitschrift für Hals-, Nasen-, und Ohrenheilkunde*, Band xxiii, Heft 2, p. 137.)

This is a plea for the intratympanic operative mobilisation of the ossicles, formerly in vogue but subsequently quite abandoned. For the most part the appropriate cases are those of adhesions following suppuration, and a few from catarrhal adhesive processes. Among the typical conditions are adhesion of the tip of the manubrium to the promontory, and if the adhesion tends to recur a small piece of the lining membrane of an egg may be inserted. The malleus may be mobilised by means of a blunt hook introduced through a vertical incision in front of the manubrium after division of cicatricial tissue behind it. Schirmunsky has operated on twenty-three ears with, as results, more or less marked improvement in the hearing and cessation of tinnitus. He describes seven cases in detail. In one of them after mobilisation of the malleus by means of vertical incisions in front and behind and detachment of the tip from the promontory, the patient was able to do without the "artificial drum" previously found necessary.

JAMES DUNDAS-GRANT.

NOSE AND ACCESSORY SINUSES.

Dacryocystorhinostomy. The Method of Dupuy, Dutemps, and Bourguet. J. BOURGUET (Paris). (*Zentralblatt f. Hals-, Nasen-, und Ohrenheilkunde*, 1928, Vol. xiii.)

All methods of treating dacryocystitis by the intranasal route are based on the method of Toti, who attempted by an external operation, resecting the outer wall of the lachrymal sac and the bony gutter, to make a fistulous communication with the nasal mucosa. These nasal operations consist essentially in making an orifice between the lachrymal sac and the nose. In the course of time, the orifice closes and the improvement obtained at first is no longer maintained. The essential feature of the method of Dupuy, Dutemps, and Bourguet is that in this region an attempt is made to suture mucosa to mucosa as general

surgeons do in a gastro-enterostomy. The lachrymal sac is first exposed in the gutter; the bony wall is resected and the nasal mucosa exposed. The lachrymal sac and nasal mucosa are opened in each case by a vertical incision and the free edges of the flaps so formed are sutured together. Since the publication of the method in April 1921, more than 800 cases have been operated on. In 98 per cent. there has been definite cure; in all operated cases the lachrymal tract has been found to be open eight months after the operation.

F. W. WATKYN-THOMAS.

Principles of Treatment of Frontal Sinus Suppuration. M. HAJEK (Vienna). (*Zentralblatt f. Hals-, Nasen-, und Ohrenheilkunde*, 1928, Vol. xiii.)

In the majority of cases of frontal sinusitis, acute or chronic, only conservative treatment is necessary. When the headaches are only transient and discharge is slight there is no need for active treatment; with intensive headaches, where bony changes can be excluded, it is sufficient to make free the excretory tract.

Radical operation is needed for a relatively small number of cases; here the point of decisive importance is the maintenance of an open tract of exit. It is immaterial whether the lining membrane be removed or not.

In Hajek's opinion the only certain method of attaining this end is open treatment of the wound, continued until an epithelisation of the tract affords a guarantee against stenosis of the duct. The absolute reliability and slighter risks of this method give it an advantage over the endonasal proceedings.

Even in the inveterate frontal sinus suppurations operative measures should be as conservative as possible. Attempts to obliterate the whole sinus are usually unsuccessful, and unnecessary, unless there is extensive disease of the bony walls. Treatment of the wound by these methods may take from one to six months.

The cosmetic results of plastic operations are very successful.

F. W. WATKYN-THOMAS.

Optic Neuritis cured or improved, in the Absence of any Nasal Sinus Lesion, by Removal of the Middle Turbinal and Free Opening of the Sphenoidal Sinus. E. ESCAT. (*Ann. des Mal. de l'Oreille, etc.*, December 1928.)

The writer has treated eight cases of optic neuritis by this method; three were bilateral. Retrobulbar neuritis was excluded in every case, He draws the following conclusions:—

(1) In every case of optic neuritis of problematical nature, whether suspected of syphilis or not, without prejudice to specific treatment and ophthalmological therapy, rhinological surgery is justifiable, even in the absence of any manifest sinus lesion.

(2) The simple method of intervention, without absolutely excluding the trans-septal operation, consists of the removal of the middle turbinal and opening up the sphenoidal sinus by the endonasal route under local analgesia by imbibition. In a very nervous subject, or an infant, ethyl chloride anæsthesia can be added to the local analgesia.

(3) The attack on the sphenoidal sinus by the orbital route must be reserved for the exceptional case where examination of the nasal cavity shows that the approach to the middle turbinal and sphenoidal sinus would be too difficult by the natural path.

(4) The earlier the intervention the more favourable the therapeutic result. In principle it is therefore desirable to operate before the onset of optic atrophy; but partial or even advanced atrophy is far from contra-indicating operation, which, as results prove, can still give a relatively excellent result. L. GRAHAM BROWN.

An Antro-ethmosphenoidal Operation. F. M. TURNBULL. (*Archives of Oto-Laryngology*, March 1929.)

The writer makes a plea for the transantral route of approach to the ethmoidal and sphenoidal sinuses, originally advised by Jansen. By this means it is possible to dissect out those sinuses, and to drain the antra and frontal sinuses without destroying any of the turbinates. The operation may be performed rapidly and without shock, under local anæsthesia.

The article is illustrated by a series of drawings which show very clearly each step of the technique. DOUGLAS GUTHRIE.

LARYNX.

Clinical Contribution to Laryngeal Papillomatosis. Drs TEMPEA and BUZOIANU. (*Ann. des Mal. de l'Oreille, etc.*, December 1928.)

The writers while commenting on the fact that the etiology and pathogeny of this affection is still obscure, claim, on the other hand, that the method of treatment which they employ may now be definitely accepted. Their views are as follows:—

In adults, surgical removal followed always by X-ray therapy, is advised. The removal, made under direct or indirect laryngoscopy, increases the efficiency of the Röntgen therapy by reducing the time of application of the rays and the length of treatment. The Röntgen therapy is necessary to prevent recurrences.

With children, owing to the operative difficulties and to the fact that the severity of the recurrences is greater than in adults, every form of surgical intervention should be avoided and Röntgen therapy administered directly. Röntgen therapy in children should entirely

replace removal by direct laryngoscopy or by thyrotomy; methods, practised until now, which not only cannot save the patient from recurrences, but expose him to the dangers of a cicatricial laryngeal stenosis.

Finally, deep Röntgen therapy, with precise dosage of rays (an insufficient dosage being irritating), seems to be the method of choice in the treatment of laryngeal papillomatosis, owing to its simplicity and its proved efficacy. L. GRAHAM BROWN.

Action and Control of the Peripheral Organs of Speech: Psychologic Principles and a Scientific Basis for Methods of Training. ELMER D. KENYON, M.D., Chief of Clinic in Disorders of Speech, Rush Medical College, Chicago. (*Journ. Amer. Med. Assoc.*, 3rd Nov., 1928, Vol. xci., No. 18.)

Production of vocal sounds depends on the co-ordination of three psycho-muscular systems, that of the mouth, throat, and larynx, that of the soft palate, and that of the chest. The muscular systems are divided into extrinsic and intrinsic groups. The complete psycho-physiologic act of articulation includes the mental picture of the sound to be produced, the making of the mouth mould, the setting in action of the oro-extrinsic muscles for the adjustment of the thyroid cartilage on the cricoid, and the production of sound by the vocal cords. Whispered voice calls for a difference in the intensity of muscular efforts. The writer agrees with Makuen's definition of voice: "A column of breath set in vibration by its own impact with the vocal bands, and reinforced by its diffusion through the various resonators into the surrounding atmosphere." The production of voice and its modification by the mouth moulds are one act in conception and one in execution. The idea of voice involves a consideration of loudness, pitch, clearness, beauty and roundness. Voice is possible without speech. The muscles in the chest are without direct conscious guidance, the muscles of the larynx partly so, while the soft palate cannot be directly controlled. The ear must be educated to appreciate quality and pitch; finger palpation over the thyroid cartilage is very valuable.

The article occupies eleven columns and is freely illustrated.

ANGUS A. CAMPBELL.

Laryngeal Cancer. J. E. MACKENTY. (*Archives of Oto-Laryngology.* March 1929.)

Malignant disease of the larynx accounts for 5 per cent. of all malignant tumours, and is almost invariably carcinoma. In 90 per cent. of cases the first sign is hoarseness or altered voice, a danger signal which is too frequently over-looked by patient and physician.

Larynx

After discussing the differential diagnosis, with special reference to tuberculosis and syphilis, the writer states that biopsy is often useful, but operation should follow as soon as possible if the tissue proves to be malignant. As regards treatment, there has been a long conflict between radicalism and conversatism. Laryngofissure is employed for early cases, but the results are less certain than those following laryngectomy, and laryngofissure is applicable only in a minority of cases. Mackenty performs a single-stage laryngectomy, employing a T-incision and separating the larynx from below upwards. In his experience radium treatment has been a complete failure. He has operated upon 700 patients since 1908, with a surgical mortality of 3 per cent. Recurrences were noted in 3 per cent. after laryngectomy, and in 35 per cent. after laryngofissure. DOUGLAS GUTHRIE.

Laryngeal Tuberculosis: A Study of Five Hundred Patients Treated at the Maryland State Sanitorium from 1923 *to* 1928. EDWARD A. LOOPER, M.D., Baltimore, and LEO. V. SCHNEIDER, M.D., State Sanatorium, Md. (*Journ. Amer. Med. Assoc.*, 6th October 1928, Vol. xci., No. 14.)

In pulmonary tuberculosis the larynx is involved in about 25 per cent. of all cases. In no case does it occur in incipient lung involvement, it is slightly more common in the male than in the female, and the commonest age is between 20 and 40. The use of the voice plays no important part in its development, as there were quite a number of singers, clergymen, and actors, none of whom were affected. Laryngeal tuberculosis is secondary to disease in the chest.

The commonest lesions were on the vocal cords and ventricular bands, arytenoids came next, while the interarytenoid sulcus and epiglottis were affected about evenly. The sputum was positive in 99.4 per cent. of all advanced cases. The diagnosis from syphilis and carcinoma was a serious problem, and was assisted by the Wassermann and, in doubtful cases, by biopsy.

Careful attention was given to sinusitis, infected teeth, and tonsils. Sanatorium treatment was recommended. Absolute silence was insisted upon, and if the temperature was over 99.4 the patient was put to bed. Of the active treatment the electric cautery proved most beneficial. It was used by the indirect method under local anæsthesia, and was repeated at monthly intervals until the condition was cured. Its use was contra-indicated in the presence of high fever, marked asthenia, and high blood-pressure, except in advanced cases where it was only palliative.

The article and discussion occupies eleven columns and is freely illustrated. ANGUS A. CAMPBELL.

Abstracts

Tuberculosis of the Larynx and Immunity. Dr Tóvölgyi. (*Zeitschrift für Laryngologie, Rhinologie, etc.*, April 1929, Band xviii., pp. 126-161.)

This lengthy article begins with a discussion on the etiology of laryngeal tuberculosis. There are two rival theories :—

(*a*) The sputum infection theory (Koch, Fränkel, Cohnheim).
(*b*) The blood-infection theory, which in Germany is upheld by Bumba.

The main argument in favour of the hæmatogenous theory is the fact that tuberculous laryngitis sometimes occurs with a negative sputum. The author believes that in this connection Bumba overestimates the value of sputum examination. A small drop of sputum actually comes under the microscope, as compared with the large quantities which pass through the glottis and come into intimate contact with the mucous membrane covering the vocal cords. Droplets of sputum, as is well known, may remain adherent to the interior of the larynx for long periods before they become dislodged by coughing. It appears that tuberculous laryngitis is a very rare disease in professional singers; these persons are so sensitive to the presence of any secretion that it is at once removed by coughing.

The *interarytenoid* region is the point of election for the tuberculous infection (70 to 80 per cent.). This can be definitely attributed to the fact that the interarytenoid region with its folds and irregularities is the place where particles of sputum are most easily arrested. After a time the characteristic thickenings (granulations) form; the sputum is then held back in this region still more readily, and even vigorous coughing cannot displace it.

The other factor therefore which enters into the etiology of tuberculosis of the larynx is the *cough*. The more frequent and the more vigorous the cough in a phthisical patient, the less likely is it that tuberculous laryngitis will develop. In the text there are several statistical tables which tend to support this hypothesis.

The author believes that vigorous coughing is so important in the prevention of tuberculous laryngitis that drugs which diminish the cough (codein, heroin, etc.) are definitely contra-indicated. These drugs should only be allowed if the cough interferes with proper sleep.

Then follows a long discussion on the relation between the tuberculous process in the lungs and the laryngeal lesions. As tuberculous laryngitis depends on sputum infection in practically all cases, it can, of course, never be primary. Reynier, at a Swiss congress in 1922, maintained that the two processes are independent of one another. The author will not allow this, but he has to admit that there have been isolated cases where treatment by galvano-

cautery punctures resulted in complete healing of the larynx, although the lung process continued and led to the death of the patient. Post-mortem it could be established that the interior of the larynx had remained healed. These cases must be extremely rare, and they only occur if the coughing reflex has been sufficiently vigorous to prevent any sputum from again adhering to the larynx.

Tuberculous laryngitis should be treated energetically by galvano-cautery punctures, even if the lung condition is bad and the patient seems to be making little progress. It is especially important to prevent dysphagia. As soon as swallowing becomes painful, the natural optimism so characteristic of phthisis gives place to pessimism with subsequent rapid deterioration.

There is a useful practical point. If one has any doubt about the desirability of treating a diseased larynx with the cautery, one makes a small puncture and watches the reaction for a few days. If there is a good inflammatory reaction, galvano-cautery treatment is indicated. On the other hand, if there is no reaction, or even further necrosis, this treatment is contra-indicated. These cases may show a reaction after a while and then become suitable for cautery treatment. A "trial puncture" is indicated before every fresh treatment.

Included in this article are several beautiful coloured plates which illustrate how sputum tends to adhere in the interarytenoid region; they also show the effect of galvano-cautery in suitable as well as in unsuitable cases. There is a very long list of references.

J. A. KEEN.

PHARYNX.

On the Embryonal Development and Structure of the Tonsils in Man (*Tonsillæ Palatinæ*). N. LOSANOW (Saratov). (*Acta Oto-Laryngologica*, Vol. xviii., Fasc. ii.)

The embryonal tonsils have been the subject of study by a number of authors, nine of whom are mentioned. The writer, however, considers that the embryology of the tonsils has not been adequately examined. He uses for his work material from the gynæcological department of the No. 1 Soviet Hospital, and from the No. 2 Maternity Hospital at Saratov.

At the end of the 2nd month one cannot discover any signs of tonsillar germ. In the middle of the 3rd month such a germ does not exist, but the place of the future tonsil is indicated by the proliferation of the epithelium and its penetration into the underlying tissue, in which an evolutional process of embryonal connective tissue elements can be observed. At the end of the 3rd month differentiation has proceeded so far that one may discern the existence of a tonsillar germ.

Abstracts

In the middle of the 4th month there can be observed several features in common with the constituted organ, namely lacunæ, though still without plugs, a rudimentary capsule, and a great number of lymphocytes in the tissue, but typical reticular elements and lymphoid follicules are still missing.

At the end of the 6th month the formation of the capsule is complete. In the 8th month the adenoid tissue of the tonsil is abundant. It is uniformly arranged, showing no follicules. Lymphoid follicules with clear centres were not shown in any embryos. At full term the lacunæ are characterised by extraordinary depth. The lymphoid elements of the tonsil have principally a histogenetic, not a hæmatogenetic, origin. H. V. FOSTER.

The Rôle of Tonsillectomy in the Treatment of Rheumatism. H. NORMAN BARNETT. (*The Medical Press*, 17th April 1929.)

Many affections which are named "rheumatic" for want of a better name are really of septic origin. This hypothesis alone can explain the almost miraculous disappearance of certain joint and other infections after the removal of septic tonsils.

For example, a young adult female patient was admitted to hospital, walking with the aid of two sticks. Both wrist and knee joints were swollen and painful. The tonsils were extremely septic, and after tonsillectomy the joint trouble rapidly disappeared so that the patient was discharged in ten days, leaving her sticks behind her.

Another female patient suffered from pain and swelling of the wrists and fingers, which had not improved under Spa treatment. Septic tonsils were removed and within a few days the joints improved, and in a fortnight the pain had gone and the deformity was considerably less. DOUGLAS GUTHRIE.

Complications of Tonsillectomy in Children. A. G. OGILVIE. (*Lancet*, 1929, i.)

The author bases his results on over 5000 cases at Great Ormond Street Hospital operated upon every year by dissection. The years chosen were 1922 to 1927. The milder complications are surgical shock, ketosis with occasional transient glycosuria, tachycardia, cervical adenitis, feverish cold, and post-tonsillectomy debility.

Slightly more important are:—

Hæmorrhage, hysterical manifestations, acute gastro-enteritis, and otitis media.

Much more grave are renal complications, septicæmia, pulmonary complications (lobar pneumonia, bronchitis). Finally, two cases occurred of acute specific fever, one being diphtheria, the other scarlet fever; both seem problematical.

Pharynx

A summary shows that it may be concluded that not more than one in two hundred cases of tonsillectomy suffers any ill-effects serious enough to confine the patient to bed as a result of the operation.

MACLEOD YEARSLEY.

Non-Operative Treatment of Tonsils. H. NORMAN BARNETT. (*Lancet*, 1929, ii.)

The author advocates the use of "London Paste" (equal parts of caustic soda and hydrated lime mixed with a little alcohol) as an alternative for operation; especially for the small buried tonsil.

The method of application, which needs care, is described. The objective is "not necessarily to destroy the entire tonsil, but rather its septic parts, and to leave a small healthy tonsil lying in its bed."

MACLEOD YEARSLEY.

Angina Agranulocytotica and Angina Monocytotica. PAUL FRENCKNER (Stockholm). (*Acta Oto-Laryngologica*, Vol. xiii., Fasc. ii.)

The problem of the relationship between ulcerous tonsillar affections and changes in the blood has been made somewhat clearer by the recognition of two formerly unknown, or at least neglected, diseases, viz., angina agranulocytotica and angina monocytotica. The former is the more important and interesting. It was discussed in November 1926 by E. Berggren, and the writer believes that it has become much more common latterly.

At the Ear, Nose, and Throat Clinic, Sabbatsberg Hospital, in the course of this year there have been altogether twenty-six deaths; five of them followed angina agranulocytotica. Many cases of so called "septic angina," or of severe suspected diphtheria not identified bacteriologically, may have been of this nature. The writer, nevertheless, is of the opinion that the increase of frequency is genuine.

The term agranulocytosis was first used by Schultz in 1922. The disease sets in acutely with high fever, chills, and malaise. The tonsils, oral cavity, or throat are affected early. On the tonsils there is a diphtheric coating; deep ulceration takes place; there is often œdema simulating peritonsillitis; ulcerous processes have been observed on the genital organs of women patients. In the blood hæmoglobin and red cells are approximately normal; the number of white cells is reduced to about 800, and even down to 200. Granular cells are almost completely absent, lymphocytosis approaches 100 per cent., monocytes between 10 and 20. The disease is commoner in women, and in middle or old age. Recovery is unusual.

Six cases are described, one of which was apparently on the way to recovery. The various therapeutic measures employed appeared to make little difference.

The conception of angina monocytotica was also first formulated by W. Schultz in 1922. The disease sets in acutely with angina accompanied usually by high fever; ulcerations develop on the tonsils, and are most frequently superficial; lymph glands are swollen in the neighbourhood; spleen and liver enlarged. In the blood hæmoglobin and red cells are normal, white cells normal or slightly increased, with decided qualitative change. Monocytes may rise to 70 or 80 per cent.

In contrast with agranulocytosis prognosis is good, cure taking place in about a week without special therapy. A case is described in detail which was bacteriologically negative to an examination for diphtheria and Vincents' angina. The monocytosis, however, was 52 per cent. and therefore no higher than it usually is in Vincent's angina. H. V. FORSTER.

ENDOSCOPY.

Value of Bronchoscopy in Diagnosis of Malignant Conditions of the Lungs. PORTER P. VINSON, M.D., HERMAN J. MOERSCH, M.D., and B. R. KIRKLIN, M.D., Rochester, Minn. (*Journ. Amer. Med. Assoc.* 10th November 1928, Vol. xci., No. 19.)

In the Mayo Clinic, since 1925, primary carcinoma of the lung was diagnosed in 77 cases. Twenty-nine were proved by biopsy and 11 of these by post-mortem. Of the proven cases 23 were male and 6 female, the youngest 29 and the oldest 64 years of age. In one case there was complete absence of pulmonary symptoms. The commonest symptoms were cough, expectoration, hæmoptysis, loss of weight, dyspnœa, pain in the chest, fever, and hoarseness. The X-ray showed a unilateral density of the hilus and an atelectatic or bronchiectatic appearance due to bronchostenosis.

In 23 cases the bronchoscope showed a firm lesion, sometimes ulcerating, partly or completely occluding the bronchus. In another 5 cases it was impossible to distinguish from inflammatory disease. The right bronchus was involved in 20 cases, the left in 8 and the trachea in one. All examinations were done under local anæsthesia. The type of growth found was squamous-cell carcinoma in 16, adenocarcinoma in 10, and lymphosarcoma in one case.

The disease is highly malignant, the average duration of life being $4\frac{1}{2}$ months. Treatment was unsatisfactory, but deep X-ray exposures were thought to be helpful. ANGUS A. CAMPBELL.

Incomplete Removal of Tonsils by Electrodesiccation. FRANK J. NOVAK, Jr. M.D., and MICHAEL ZELLER, Jr. M.D., Chicago. (*Journ. Amer. Med. Assoc.*, 29th December 1928, Vol. xci., No. 26.)

In 1921 the authors contemplated a series of 100 cases of electro-desiccation, but the results were so bad that only seven operations were done.

They now report the case of a physician, aged 40, who following an attack of acute tonsillitis developed a severe general infection with positive blood cultures of streptococcus hæmolyticus. Between April and December 1926 three electro-coagulation operations were performed. The patient steadily got worse and insisted on having the scar explored, when a piece of diseased tonsil was discovered; after its removal recovery was rapid.

In spite of the so-called improvement in the technic of electro-desiccation, the authors condemn the operation and state it cannot compete with the present-day method of surgical tonsillectomy.

ANGUS A. CAMPBELL.

Peptic Ulcer of the Œsophagus. CHEVALIER JACKSON, M.D., Philadelphia. (*Journ. Amer. Med. Assoc.*, February 1929, Vol xcii, No. 5.)

In 42 years experience the writer has diagnosed 88 cases of peptic ulcer out of more than 4000 cases of œsophageal disease. He considers focal infection the chief etiological factor, with the tonsil as the most frequent site of infection; islands of gastric mucosa are an accessory cause. Retrograde flow of gastric juice may not be a perpetuating etiological factor, but it is certainly a cause of pain. Although ulcers may be symptomless, the most characteristic symptom is retrosternal pain, or discomfort extending through to the back. The diagnosis is made by the œsophagoscope and biopsy. X-ray is negative. The treatment consists of removal of focal infection and the local weekly application of 10 per cent silver nitrate, alkalies: especially sodium bicarbonate, are useful to control symptoms.

ANGUS A. CAMPBELL

Œsophageal Diverticula. CHARLES T. STURGEON, M.D., Los Angeles. (*Journ. Amer. Med. Assoc.*, 2nd February 1929, Vol. xcii, No. 5.)

Pulsion diverticulum usually occurs in elderly persons, mostly men, and is always in the cervical region. It is probably caused by incoordination of the cricopharyngeus muscle. A series of seven cases is reported. The pouch was on the left side of the neck in four and on the right side in three cases. The chief complaint was dysphagia and regurgitation of food. The diagnosis was made by X-ray and confirmed by œsophagoscopy. The patients were all admitted to hospital and treated for several days to improve their general condition. Forcing of fluids and food was resorted to. All the patients were operated on under local anæsthesia and in two stages. There were no fatalities and no recurrences.

The article is freely illustrated and has a bibliography.

ANGUS A. CAMPBELL.

Abstracts

Abscess of the Lung: Experimental Studies in Chronicity. IVAN F. WEIDLEIN, M.D., and LOUIS G. HERRMANN, M.D., Cleveland. (*Journ. Amer. Med. Assoc.*, Vol. xci., No. 12, 22nd September 1928.)

A few years ago the authors produced abscesses in the lung experimentally by placing in the venous circulation vein-segments containing bacteria and blood. All these abscesses healed within three weeks. The present experiments were performed to determine chronicity. The chief factors studied were cough, foreign bodies, and types of organism. After the abscesses were produced the animals were exposed to chlorine gas to stimulate coughing. This only prolonged the abscess period by one or two weeks. Six animals had small pieces of cotton introduced into the bronchi. These pieces were clamped into an inverted skin clip and impregnated with scrapings from pyorrhea patients. In only one case did the lung form an abscess, and from this pus, spirochetes and fusiform bacilli were obtained. The authors feel that complete occlusion of the bronchus or injury to its wall is necessary to produce an abscess. When these same anærobic organisms were introduced into the blood stream, a chronic abscess, simulating those found in man, was produced which contained thick foul pus. The authors emphasise the fact that two distinct types of abscess are formed and that these have different sources in the beginning.

The article is freely illustrated and has a bibliography.

ANGUS A. CAMPBELL.

Una Moneda de cinco centimos llegada a la cavidad pleural despues de perforar el esofago. Extraccion. Curacion. RAPHAEL G. TAPIA HERNANDO. (*Revista Espanola y Americana de Laringologia*, Ano xx. (1929), January, No. 1, p. 22.)

A girl of 4, was brought to the clinic on 12th December 1926. She had swallowed a copper coin of 5 centimes on 14th July 1926. No symptoms followed for five days, when a doctor tried to extract it without success, but produced dysphagia for both solids and liquids. Improvement followed, but some difficulty to the passage of solids continued. A specialist in a neighbouring town then performed œsophagoscopy under chloroform. He saw the coin but could not extract it. The dysphagia immediately reappeared, accompanied by cough, dyspnœa, and fever lasting a fortnight, during which time the child could only be fed on liquids. Swallowing had become quite normal at the end of a month, but the other symptoms did not quite disappear. She complained from time to time of sharp pains on the right side of the chest. On arrival at the clinic there was extraordinary wasting; the movements of the right side of the

chest were diminished; dullness and pleural friction at the base; swallowing normal. Œsophagoscopy showed a scar in the lower part of the right wall of the gullet. A radiogram by Dr Larru showed a coin in the costodiaphragmatic space. On 20th December Dr Olivares performed a costal resection and extracted the coin, which was lodged in the pleural cavity surrounded by granulations. The quantity of pus was very scanty. The child returned to its village a week later. L. COLLEDGE.

MISCELLANEOUS.

Fatalities from Local Anesthetics. EMIL MAYER, M.D., Chairman of the Committee for the Study of Toxic Effects of Local Anesthetics of the American Medical Association, New York. (*Journ. Amer. Med. Assoc.*, 21st April 1928, Vol. xc., No. 16.)

Since the publication, in 1924, of the report of the Committee for the Study of Toxic Effects of Local Anesthetics, fourteen additional deaths have come to the author's notice, none of which had been recorded in medical journals. The Committee stated that cocaine paste was dangerous and one of these deaths was from this cause. The author observed that cocaine is used much less frequently than formerly, being limited to the aiding of examinations and for endo-laryngeal work. After eight years of study of this subject, he still feels that procaine hydrochloride is the safest of all local anesthetics now in use. Of the fourteen deaths reported, seven were tonsil cases, two were from cocaine applied to the pharynx, in one case a 4 per cent. solution, in the other a cocaine paste. Two followed cocaine swabbing with procaine injected, two were from procaine injections only, and one other followed the injection of 0.5 per cent. solution of butyn.

ANGUS A. CAMPBELL.

The Hæmostatic Action of X-rays in Oto-Rhino-Laryngology. G. CANUYT. (*Ann. des Mal. de l'Oreille, etc.*, December 1928.)

The writer begins with a historical survey of this method of treatment in severe cases of hæmorrhage, spontaneous or provoked. He then describes the action of X-rays on the coagulation of the blood *in vitro* and *in vivo*, and accepts the view that they accelerate the formation of thrombin, leaving the fibrinogen content unmodified.

After referring to the general employment of X-rays clinically in all types of patients who suffer from hæmorrhages, whether they belong to the class known as hæmophilics or suffer from any other form of blood diathesis, he passes on to their special application in oto-rhino-laryngology.

Herein, he advocates their use as a preventative measure before operation when hæmorrhage is to be feared, after a systematic and detailed biological examination of the blood, and as a curative measure for severe post-operative hæmorrhages and spontaneous hæmorrhages when all other remedies, local and general, have failed and the patient's life is in danger.

He gives notes, with the method of irradiation, of 13 cases where the treatment was of the greatest benefit.

There is an extensive bibliography.

L. GRAHAM BROWN.

GENERAL NOTES

ROYAL SOCIETY OF MEDICINE.

1 *Wimpole Street, London, W.* 1.

Section of Laryngology.—The Opening Meeting of the Session, 1929-30, will be held on Friday, 1st November, at 5 P.M.

President, Dr Dan McKenzie. *Hon. Secretaries*, Mr M. E. Vlasto, 26 Wimpole Street, London, W. 1, and Mr V. E. Negus, M.S., 133 Harley Street, London, W. 1.

Section of Otology.—The Opening Meeting of the Session, 1929-30, will be held on Friday, 1st November, at 9.30 A.M.

President, Mr W. M. Mollison, M.Ch. *Secretaries*, Mr F. C. Ormerod, F.R.C.S., and Mr L. Graham-Brown, F.R.C.S., 32 Devonshire Place, London, W. 1.

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THE SEMON LECTURE, 1929.

Dr Harris P. Mosher of Boston, U.S.A., has been invited by the Semon Lecture Board to give the Semon Lecture of the University of London. The address, which is entitled "The lower end of the Œsophagus at Birth and in the Adult," will be delivered in the Hall of the Royal Society of Medicine, 1 Wimpole Street, London, W. 1, on the afternoon of Thursday, 5th December, at 5 o'clock.

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BOOKS FOR REVIEW.

The following books have been received for review:—

The Nose, Throat and Ear and their Diseases. By Chevalier Jackson and George Morrison Coates. Published by W. B. Saunders.

The Mechanism of the Larynx. By V. E. Negus, M.S. Published by Heinemann.

Pathologie der Oberen Luft und Speisewege. von Prof. Dr Felix Blumenfeld u. Prof. Dr Rudolf Jaffé. Leipsig: Curt Kabitsch.