Abstracts

Treatment of Facial Paralysis. A Case of Facial Nerve-graft by the Duel-Ballance Method.—C. HAMBLEN THOMAS.

E. B., male, aged 59.—First seen *June*, 1932, with left facial paralysis secondary to left chronic suppurative otitis media. Radical mastoid operation performed; no improvement with regard to the paralysis by *October*, 1933, in spite of massage and electrical treatment. At this time there was galvanic response in the left facial muscles but no Faradic response.

November 2nd, 1933.—Admitted to hospital. Preliminary exposure of facial nerve hiatus, and graft from leg isolated.

November 14th.—Graft transferred to hiatus in facial nerve.

December 9th.—Faradic response of levator anguli oris noticed. All facial muscles on left side show brisker response to galvanic stimulation.

January 25th, 1934.—Faradic response of levator labii superioris alæque nasi. Galvanic reaction improved.

April 23rd, 1934.—All reactions stronger but no further spread of Faradic response.

ABSTRACTS

EAR

The Treatment of Cholesteatomatous Middle-ear Suppuration. A. REJTÖ. (*Acta Oto-Laryngologica*, XX., fasc. 1-2.)

In the conservative treatment of cases of chronic suppurative otitis media in which there is any reason to suspect the presence of cholesteatoma, it is of very great importance to avoid the use of any form of watery lotions or drops. Watery solutions, by causing swelling of the epidermal masses, sometimes actually precipitate the onset of intracranial complications.

Cholesterin occurs not only in the form of crystals, but also as an amorphous ester, which forms a cement, binding together the epidermal lamellae, and it is this substance which actually erodes the bone.

In the treatment of cholesteatoma, therefore, our chief aim must be to remove the cholesterin. By so doing, not only do we get rid of the substance which erodes the bone, but we extract the cement which binds together the epidermal masses, which then fall apart and are easily removed by syringing. The best agent for this purpose is chemically pure carbon tetrachloride used by means of an attic syringe. If, after this treatment has been carried out two or three times a week for six or eight weeks, the local condition is not

improved and the cholesterin index of the blood still remains high, the radical mastoid operation should be undertaken.

Among cases of chronic suppurative otitis media those with cholesteatoma must therefore be placed in a separate group, and it should be regarded as a serious error to use any kind of watery solution in their treatment.

THOMAS GUTHRIE.

Cholesteatoma of Traumatic Origin. G. KELEMEN. (*Acta Oto-Laryngologica*, xx., fasc. 1-2.)

Serial sections (some of which are reproduced in this paper) of temporal bones from fatal cases of fracture of the base of the skull sometimes show conditions such as, had the injury not been fatal, might have predisposed later to the development of cholesteatoma.

There are found, for example, hæmorrhages into the folds around the auditory ossicles and into the substance of the tympanic membrane, forcing their layers apart and forming cavities which may give rise to circumscribed cysts. Solutions of continuity of the upper part of the tympanic membrane may, after cicatrization, form deeply retracted recesses in which epithelial accumulation may take place. Moreover, as the trauma stimulates the growth of epithelium and favours the development of secondary inflammation, it may both originate the cholesteatomatous process and encourage its further development.

THOMAS GUTHRIE.

Rupture of Suppurative Cervical Glands into the External Auditory Canal. H. ROSENWASSER. (*Archives of Oto-Laryngology*, 1934, xix., No. 5.)

The discharge of pus through the external auditory canal from a large parotid abscess is not uncommonly observed by the general surgeon. Much more rarely the pus from an abscess of the upper cervical glands perforates into the auditory canal. The recognition of this condition is of great clinical importance to the otologist, although reports of such cases in the literature are infrequent. As a rule the pus escapes at the attachment of the membranous to the bony canal. This attachment is very loose in children under the age of four years and, on that account, the condition is more frequent in children than in adults. The writer reports four cases.

In the first two cases there was a large tender glandular mass in the upper part of the neck. Pressure upon this swelling caused pus to exude from the external auditory canal, and a fistulous opening between the bony and cartilaginous parts was demonstrable.

In the other two cases the diagnosis was made difficult by the presence of middle-ear suppuration, and the external canal was

narrowed so that a clear view of the tympanic membrane was not easy to obtain. As the discharge lessened, however, the nature of the case became evident. In both cases mastoidectomy proved to be necessary. All the patients made good recoveries.

The condition is one of great importance to the otologist and to the pediatrician. In the writer's experience favourable results have been obtained by treating the glands conservatively.

DOUGLAS GUTHRIE.

The Present Position of the Operative Treatment of Meningitis. ERICH RUTTIN. (*Wiener Klin. Wochenschrift*, Nr. 17, Jahr 47.)

The evolution of the surgical treatment of meningitis during the past thirty years is briefly considered. Neumann's method of trans-labyrinthine drainage of the basal cisterns, whilst fairly successful if carried out during the early stages of trans-labyrinthine meningeal infection, was found to be inefficient in those cases, considerable in number, in which bacteria were present in the fluid removed by lumbar puncture, as well as in cases which occurred with acute otitis.

For these latter Neumann has advocated a method which may be briefly outlined as follows :

Mastoidectomy is first carried out. If the attic is high one works along the upper wall of the meatus until the outer wall of the attic is removed. It is sometimes possible to do this whilst maintaining intact the upper framework of the membrana tympani and to visualize the upper tympanum as far as the roof of the tube. In such cases it is possible to remove the roof of the tympanum and, after elevation of the dura, to visualize the upper surface of the pyramid without injuring the auditory ossicles. If the attic is low-lying, a triangular gusset is removed from the posterior wall of the membranous meatus. This may not always be necessary in a meatus which is anatomically wide, as sometimes in such cases a simple incision at the junction of the upper and posterior membranous meatal wall parallel with the direction of the meatus will suffice. Moreover, a tear often occurs in separating the membranous meatal tube from the bony meatus, which makes it unnecessary to excise a gusset or to make a special incision. After the mobile auditory meatal tube has been depressed, the lateral attic wall is removed. The *pars tensa* and the ossicles remain undamaged, and sufficient space and supervision is obtained to allow of the removal of the tympanic roof as far as the tube opening and to permit of inspection of the upper surface of the pyramid.

The middle fossa dura in the mastoid region having been laid free as described, that of the posterior fossa is exposed in the same way, as far as possible. After exposing the sinus dura and that of

Trautmann's triangle, the transition fold from the upper to the posterior surface of the pyramid, as well as the dura going down to the bulb, is exposed. In both these areas it is advisable to detach the dura with great care and to exclude the possible presence of a deep extradural or eventually peri-bulbar abscess. Isolated diseased cells are also sought for. Finally, the dura with its contained superior petrosal sinus, is carefully and bluntly elevated from the petrosal angle, which is then removed. Owing to the clearing out of the cells lying in the right-angle between the inner lamellae of the middle and posterior cranial fossae, where they unite to form the petrosal angle, the removal of the latter can be easily accomplished by applying the chisel vertically, first to the posterior petrosal angle and then just behind the labyrinth.

In this manner the tegmen antri and tympani is widely removed. Any cells lying in the upper surface of the pyramid are also opened up.

Ruttin supplements the operative treatment by intra-lumbar injection of Solganal. Daily, or on alternate days, 20 c.cm. of spinal fluid is withdrawn and 10 c.cm. of a physiological salt solution containing 0·01 to 0·05 Solganal is introduced.

By means of the labyrinth operation or the extended operation described above (both after Neumann) and systematic Solganal therapy, Ruttin has succeeded in curing about 50 per cent. of his cases.

J. B. HORGAN.

Manometric Observation of the Inner Ear during Caloric Stimulation. Experiments on Animals. T. SÁZSZ. (*Acta Oto-Laryngologica*, xx., fasc. 1-2.)

The author has made observations on labyrinth pressure by means of a manometer attached to a fine tube, which is inserted and hermetically sealed in the round window of a dog or a rabbit. At the same time the blood pressure is observed by means of a cannula in the carotid artery.

He finds that the caloric tests generally give rise to changes of pressure that can be detected with the labyrinth manometer. Cold and heat do not, however, produce opposite changes in the manometric reading with any regularity.

The changes in labyrinth pressure usually correspond closely with those in the carotid blood pressure. Not infrequently, however, the changes in labyrinth and carotid pressure are in opposite directions; and, when this is so, it may be supposed that alterations in the calibre of the blood vessels of the inner ear play a compensating rôle.

THOMAS GUTHRIE.

Ear

Otomycosis. OMAR C. AMSTUTZ. (*Jour. A.M.A.*, May 12th, 1934.)

The writer reports the case of a woman aged 23, a school teacher, who complained that her left ear hurt, felt full, and was slightly deaf. A dirty whitish layer was observed covering the drum and part of the adjacent auditory canal. The mass was removed by irrigating with a weak solution of bicarbonate of soda. There was no perforation of the drum. Microscopic examination of a potato culture transplant demonstrated a mixture of *Aspergillus niger* and *Rhizopus nigricans*, which latter may or may not have been contamination. The potato cultures were experimentally treated with various antiseptics, and alcoholic solutions were found to have an inhibitory and even fungicidal effect. Instillations of 2 per cent. salicylic acid in 95 per cent. alcohol were used for a short while, and the condition has not recurred during a three year period.

ANGUS A. CAMPBELL.

Otogenic General Infection in Infancy and Childhood. J. Q. HOFER. (*Wiener Klin. Wochenschrift*, Nr. 47, Jahr 46.)

Clinically, a distinction is made between a pyæmic type and a septic type.

The pyæmic type is characterized by rapid and precipitate variations in temperature accompanied by rigors and metastatic abscess formation. In infants, however, the pyrexia may be continuous and be prominently associated with cerebral symptoms such as delirium, cervical rigidity, and signs of meningitis. Rigors are not observed before the second year of life.

The septic type of general infection is much less common. It may occur as a result of, or without, a sinus phlebitis. The bacteræmia is a cardinal symptom and may cause marked cerebral symptoms and rapid death. The toxic symptoms tend to mask other symptoms such as hæmorrhagic nephritis, enlargement of the liver and spleen, septic œdema of the skin, erythema, cutaneous hæmorrhages, retinal hæmorrhage, or endocarditis.

Metastatic abscesses do not occur in simple cases of otogenic sepsis, but mixed septic and pyæmic cases may occur.

The differential diagnosis is fully detailed and the writer advocates exploratory antrostomy in cases of doubt.

Hofer does not consider that X-ray examination is a reliable help under the age of eight years.

The treatment is pre-eminently operative, assisted by appropriate general clinical immuno- and sero-therapy. The unspecific protein therapy in suitable small doses may also be tried.

J. B. HORGAN.

Abstracts

The Diagnostic Importance of Encephalography in Cases of Intra-cranial Complications of Otogenous Origin. HANS BRUNNER. (*Wiener Klin. Wochenschrift*, Nr. 7, Jahr47.)

A detailed account is given of two cases of temporo-sphenoidal lobe abscess and one case of circumscribed meningitis of otogenous origin in which lumbar encephalography was carried out without any injury to the patients. This implies the withdrawal of a varying amount of cerebrospinal fluid by lumbar puncture and the subsequent injection of a volume of air roughly equivalent to two-thirds of the fluid withdrawn. Each of the patients was a child in whom the subsequent radiographic examination materially aided the diagnosis and allowed of successful surgical intervention in the two brain abscess cases.

Whilst not advocating this diagnostic procedure as a routine and not overlooking the, at least theoretical, dangers of doing a lumbar puncture in such patients, Brunner points out that in those not infrequent cases with general symptoms, in which the diagnosis remains in doubt and in which it would be inadvisable to await the classical focal symptoms, the timely performance of encephalography may give a definite indication of the intra-cranial lesion and so allow of timely intervention.

J. B. HORGAN.

The Clinical Forms of Labyrinth Inflammation. ERICH RUTTIN. (*Wiener Klin. Wochenschrift*, Nr. 6, Jahr 47.)

The following five forms of clinical labyrinthitis are described :

1. *Circumscribed Labyrinthitis.*

The patient describes characteristic attacks of rotatory vertigo which last for seconds, minutes, or hours. Especially characteristic are what may be called the " shoe-tying symptom " and the " teeth cleansing symptom ".

During the attack nystagmus occurs to the side of the disease, to the opposite side, or to each side. The auditory function is retained but is more or less deficient, the caloric reaction and the turning reaction are easily demonstrable, and the fistula symptom is almost always positive.

2. *Diffuse Serous Secondary Labyrinthitis.*

As this affection is secondary to a circumscribed labyrinthitis, the history is the same as in that affection.

There also exist severe vestibular symptoms ; severe vertigo culminating in vomiting, and nystagmus of the second to the third degree to the opposite side. The auditory function is severely injured or lost, the caloric reaction very weak or negative, the turning reaction is, on account of the patient's condition, not ascertainable ; and the fistula symptom is positive.

3. *Diffuse Serous Induced Labyrinthitis.*

Owing to its sudden onset and cause (œdema) there are no premonitory symptoms. There are marked vestibular symptoms, vertigo, disturbances of equilibrium with eventual vomiting, and nystagmus of the second or third degree towards the opposite side. The hearing is severely curtailed or lost, the caloric reaction is very much reduced or negative, the turning reaction is usually not ascertainable, and the fistula symptom negative.

4. *Diffuse Suppurative Manifest Labyrinthitis.*

The history varies according to whether the affection has been preceded by a circumscript labyrinthitis or by a diffuse serous labyrinthitis. Premonitory symptoms are entirely absent when the affection results from a sudden purulent invasion of a previously healthy labyrinth. These are the severest vestibular symptoms, nystagmus of the third degree to the opposite side, deafness, and loss of caloric reaction. The turning reaction is not ascertainable and the fistula symptom is negative.

5. *Diffuse Suppurative Latent Labyrinthitis.*

There will be a history of an attack of diffuse suppurative labyrinthitis, the symptoms of which had lasted from three to fourteen days. The patient or his medical attendant may be unaware of the otogenous origin of this crisis and attribute it to a gastric attack. Deafness is present and the caloric and turning reaction and the fistula symptom are negative.

The danger of initiating an attack of meningitis by performing the radical mastoid operation in cases of diffuse suppurative latent labyrinthitis is referred to.

If a radical operation be carried out in a case in which the labyrinth functions are still present, as for instance in a case of circumscribed labyrinthitis, a progressive loss of the functions will ensue in the following sequence: hearing, caloric reaction, turning reaction, and fistula symptom. In this event we have time to undertake the labyrinth operation and to circumvent the onset of meningitis. These valuable indications of progressive infection and loss of function are absent in cases in which the radical operation is carried out when the labyrinth function is dead and our first warning is the actual meningitis.

In Ruttin's hands a fatal termination after the labyrinth operation was, at the highest, 1 per cent. in those cases in which the operation was undertaken at a time when the spinal fluid was still clear, whereas when it showed evidence of infection the mortality was very high. It is admitted that in some cases meningeal infection is practically synchronous with labyrinth infection.

J. B. HORGAN.

Abstracts

On the Endosteal Bony Layer in the Human Labyrinth Capsule. K. GASTAUER. (*Arch. Ohr-, u.s.w., Heilk.*, 1934, CXXXVIII., 204-10.)

The bone in the labyrinth capsule is subdivided into the periosteal, enchondral and endosteal layers. The endosteal is distinguished from the enchondral layer by its staining properties and by the absence of cartilage remains. The endosteal bone is membrane-formed and is fairly distinct in most regions of the inner ear. Its features have been specially studied in this article which is based on the examination of some forty series of horizontal and vertical sections of labyrinth capsules.

Inside the cochlea the endosteal bone is generally well represented in the basal coil. It is fairly well marked in the middle coils, but there may be deficiencies, especially in that part of the bone immediately underlying the *ligamentum spirale*. In the apical coil the endosteal bone layer is very often absent.

In the vestibule the endosteal bony layer shows great variations. It is generally well marked in the part on the oval window side. But it is absent immediately around the oval window, where its place is taken by cartilage.

In the semi-circular canals the endosteal bony layer is very thin, and is absent in many places. The author was unable to discover any kind of regularity in the arrangement here.

Dr. Gastauer also discusses the embryology of the endosteal bone and believes that the gaps in this layer are simply due to an absence of ossification of the endosteum in certain parts. He does not agree with those authors who say that it is a question of re-absorption of the endosteal bony layer in the course of growth or adjustment of the axes of the semi-circular canals. As is well known, the growth of the bony labyrinth is practically completed at birth. There are three illustrations in the text.

J. A. KEEN.

Experimental Researches on the Semi-circular Canal Apparatus of the Pigeon. E. HUIZINGA. (*Acta Oto-Laryngologica*, XX., fasc. 1-2.)

The classical experiments, in which Flourens and, many years later, Goltz, Bruer, and Ewald destroyed the semi-circular canals of pigeons, were repeated in a modified form by the author and yielded some new information regarding the function of the cristae. In this research, which involved operations on over 150 pigeons, a principal object was to settle the question whether the results of dividing the semi-circular canals were due to irritation of the cristae or to loss of their function.

In pigeons the posterior ampulla may be removed without loss of function of the remainder of the labyrinth. Even after bilateral operation only slight disturbances are observed; but it makes a

great difference whether the dissection of the canals has been executed carefully or roughly. Rotation experiments show that, while rough dissection damages more than the corresponding semi-circular canal, careful dissection produces loss of function of the corresponding crista alone. It *is* a loss of function, for division of the posterior canal produces the same effect as extirpation of the posterior ampulla.

Careful dissection proves that the semi-circular canals can be divided into three systems : a horizontal and two crossed vertical. Loss of function of each system and violent reactions consisting of pendulum-movements of the head (" Kopfpendeln ") occur only when two corresponding canals are divided. This phenomenon depends upon marked loss of tone of the neck muscles, the degree of which can be measured by objective methods. Thus the cristae in pigeons are the source of constant powerful nerve impulses.

THOMAS GUTHRIE.

A Contribution to Knowledge of the Anomalies of form of the Outer Ear. A. SERCER. (*Acta Oto-Laryngologica*, xx., fasc. 1-2.)

A case is described of a congenital deformity, to which the author gives the name of *Cryptotia bilateralis*. In this condition the cartilage of the pinna and meatus is normally developed, but the pinna is not raised from the surface and free, but is embedded under the skin of the side of the head, suggesting in appearance an artificial pinna inserted under the skin.

In the author's case, that of an infant aged eight months, a plastic operation was successful in freeing the pinna and overcoming the deformity. The findings at the operation pointed to arrest of development rather than intra-uterine adhesions as the cause of the anomaly.

This deformity appears to be extremely rare, having been reported previously only by Gruber and Wreden.

THOMAS GUTHRIE.

NOSE AND ACCESSORY SINUSES

Supraorbital Neuralgia and Aplasia of the Frontal Sinuses. K. GÖTZMANN. (*Arch. Ohr-, u.s.w. Heilk.*, 1934, cxxxviii., 170.)

In a series of twenty-three patients with absent frontal sinuses M. Meyer found thirteen cases of supraorbital neuralgia, and suggested that there was a causative relationship between the two conditions.

Dr. Götzmann was unable to confirm these findings. During one year, 1,330 adult patients who complained of headaches, etc., were

X-rayed in order to study the accessory sinuses. Among them were thirty-nine cases (3 per cent.) with absent frontal sinuses, either on one or on both sides. Of these patients only nineteen complained of supraorbital pain, and then not necessarily on the side where the frontal sinus was absent.

Further, patients with supraorbital neuralgia were investigated and the author was unable to find among them a special preponderance of aplasia of the frontal sinuses.

J. A. KEEN.

The Treatment of Frontal Sinus Suppuration. M. HAJEK. (*Wiener Klin. Wochenschrift*, Nr. 47, Jahr 46.)

This is a short account of the methods of treatment at present employed by the writer in cases of empyema of the frontal sinus.

He divides cases of frontal sinus empyema into those in which the bony wall is not involved and those in which its involvement is either imminent or already in existence.

In the first of these subdivisions Hajek re-establishes the patency of the frontal-nasal duct by the removal of the anterior end of the middle turbinate and other local diffuse hypertrophy, polypi, etc. In the greater number of cases this is effective in removing the persistent headache and diminishing the quantity and purulence of the secretion. It is very rarely necessary to resort to external surgery in these cases. Nowadays this intranasal interference embraces the removal or opening up of fronto-nasal cells or of cells surrounding the fronto-nasal duct, if such are present.

In those cases in which external operation is requisite, and in which no form of intranasal surgery will suffice to ward off threatening and serious complications, Hajek bases his external interference on the well-established fact that it is impossible to obtain adequate intranasal drainage and healing without ensuring the permanency of the fronto-nasal duct, and on his own observation that a seemingly very much deranged frontal sinus mucosa is capable of spontaneous cure if adequate care is taken to ensure free and prolonged drainage of its secretion.

To ensure this he keeps the external wound open by gauze plugging for months, until the new fronto-nasal duct has become quite epithelialized and its permanent patency has, visibly, become an accomplished fact. The orbital or inferior wall of the sinus with its mucosa, and also the frontal process of the maxilla, are freely removed in all cases. Polypi are removed from the sinus, if present, but its remaining lining mucosa is left undisturbed unless it is detached or necrotic. If the lining mucosa be entirely removed, the anterior wall of the sinus is preserved, provided the sinus is not unusually large or irregular in formation. In the latter events the anterior wall is also removed, either entirely (Riedel), or with the

preservation of a bony bridge (Killian). But, in any case, an open wound is maintained until free and permanent intranasal drainage is assured. J. B. HORGAN.

The Plastic Surgery of the Nose. J. R. NETTO. (*O Hospital (Rio de Janeiro)*, vi., No. 8, August, 1934.)

A number of cases from the author's practice are described, such as the treatment of atresia of the nostrils by Thiersch grafting, the reconstruction of the columella by a flap from the arm, and the restoration of saddle nose by costal cartilage grafting and by the use of ivory. Netto also describes a case of paraffinoma of the nose and its histological appearance.

Dealing with the materials used in reconstruction, he regards the skin graft as a source of great value. Free grafts of fat are useful to fill up small depressions. A graft of the patient's own cartilage from the nasal septum or the ribs involves some risk of subsequent shrinkage. Ivory gives good results and is without risk if due regard is paid to the possibility of sepsis. Cork has also been used with advantage but, in the author's opinion, it is subject to post-operative deformity. Paraffin ought never to be used, as its effects are often dangerous and ineffective.

The paper is illustrated by ten photographs.

DOUGLAS GUTHRIE.

Oto-rhinological Aspects of Scarlet Fever with Particular Reference to the Sinuses. GORDON D. HOOPLE and LINUS S. CAVE (Syracuse, N.Y.). (*Jour. A.M.A.*, October 7th, 1933.)

Two series of cases of scarlet fever were studied. In the first, numbering 292 cases, the examination consisted chiefly in X-ray films, while in the second series, numbering eighty, a serious attempt was made to correlate the clinical and Roentgenological findings. The clinical examination failed to support the X-ray evidence in every case. In both series Roentgen evidence of sinusitis was present in approximately 90 per cent. of the cases. The percentage of clear sinuses in both series was much higher in the older aged groups than in the younger. Altogether there were forty-three cases of otitis media and, in all of these, there was X-ray evidence of sinusitis, and in all but one there was involvement on the same side as the infected ear. Only two of the cases of otitis media were clinically negative to sinus disease. ANGUS A. CAMPBELL.

Nasal Disease and Asthma; chemical and physico-chemical researches on polypi. C. R. GRIEBEL. (*Arch. Ohr-, u.s.w., Heilk.*, 1934, cxxxviii., 178.)

More than one half of all asthmatic patients show abnormal findings in the nose. The nasal polypi in such cases have a high

mineral content and show an alkaline reaction (pH 7·52-8·30). The formation and growth of polypi is an osmotic process. Certain albumins ("Natriumalbuminat" and "Ammoniumalbuminat") play an important rôle in maintaining a state of hypertonus inside the polypus and attracting both water and inorganic salts. The presence of salts further increases hypertonicity. The osmotic maximal pressure of these albumins lies on the alkaline side.

J. A. KEEN.

LARYNX

Effect of Light Treatment in Laryngeal Tuberculosis. O. STRANDBERG and J. GRAVESON. (*Lancet*, 1934, i., 128.)

The authors describe the technique of their carbon-arc light bath and express their surprise at St Clair Thomson's opinion given in the *B.M.J.*, 1932, ii., 905. No selection of cases is made and they state that in the majority of their cases light alone is sufficient to heal the laryngeal complication. Their results are shown in four tables and suggest a less gloomy prognosis than has hitherto been supposed for laryngeal tubercle.

MACLEOD YEARSLEY.

A Case of Polypoid Angioma of the Larynx. M. EBSKOV. (*Z. Laryng.* 1934, xxv., 214-18.)

This condition is seldom seen and is reported on account of its rarity. The tumour, a cavernous angioma, was removed by laryngofissure and it was found to have a stalk arising from the anterior surface of the left arytenoid cartilage. Laryngofissure, with or without preliminary tracheotomy, is recommended as the best treatment. The author is not in favour of removal by the indirect method, on account of the danger of serious hæmorrhage.

J. A. KEEN.

Congenital Stenosis of the Larynx. J. M. DA ROCHA. (*O Hospital* (*Rio de Janeiro*), August, 1934, vi., No. 8.)

The writer describes a case of diaphragm of the larynx in an infant of eleven months, who was admitted to hospital as a suspected case of diphtheria. Broncho-pneumonia developed and proved fatal. At *post mortem* examination a membranous structure stretched across the posterior part of the larynx between the arytenoids, leaving free only a small opening in the anterior part. The various causes of laryngeal stenosis in infants are described and the more widespread practice of laryngoscopy in small children presenting obscure respiratory symptoms is advised.

DOUGLAS GUTHRIE.

Larynx

Uni- and Bilateral Division of the Superior Laryngeal Nerve (Ramus Internus) in cases of Advanced Tuberculosis of the Larynx. ANTON-SATTLER. (*Wiener Klin. Wochenschrift,* Nr. 18, Jahr 47.)

Owing to the unreliable and often fugitive relief of dysphagia by alcoholic injection of the superior laryngeal nerve, the writer has, in twenty selected cases of severe dysphagia of tuberculous origin, adopted the practice, first recommended by Avellis, of resecting the internal laryngeal branch of the superior laryngeal nerve. The operation, which can in skilled hands be safely and expeditiously carried out, does not upset the patient and gives a very reliable and lasting result.

The operation can be carried out on each side (six cases). It is then necessary to allow an interval of fourteen days between each intervention. This precaution may not quite eliminate initial unpleasant disturbances of deglutition. As a rule, however, surprise is experienced at the facility of the act with a completely insensitive larynx. The precaution was taken of giving nothing but pap food for the first few days. It is necessary to ensure that the dysphagia is not due to pharyngeal ulceration. The side to be operated upon is determined by the subjective and objective symptoms, the former being decisive in cases with evident bilateral involvement.

The operation is carried out under local (infiltration) anæsthesia. The incision runs from the anterior margin of the sterno-mastoid at the level of the superior cornu of the hyoid bone to the middle of the lateral plate of the thyroid cartilage. After incising the skin, platysma, and the superficial layer of the cervical fascia, the dissection is deepened external to the upper belly of the omo-hyoid and the thyro-hyoid muscle, to expose the loose cellular tissue surrounding the neuro-vascular sheath. The superior tubercle of the thyroid and the major cornu of the hyoid bone offer useful palpatory landmarks. The common or, eventually, the external carotid artery and the internal jugular vein are drawn outwards. The internal branch of the superior laryngeal nerve runs obliquely downwards and forwards, dorsal to the external carotid artery, where it is fairly easily discerned and divided. It disappears deeply beneath the lateral border of the thyro-hyoid muscle and splits up into its terminal branches before piercing the thyro-hyoid membrane to reach the larynx. After division, a small portion of the peripheral stump is removed. J. B. HORGAN.

The Relationships of Oto-Rhino-Laryngology to Speech Defects. EMIL FRÖSCHELS. (*Wiener Klin. Wochenschrift,* Nr. 50, Jahr 46.)

The writer explains the difficulties which a partially deaf child experiences in imitating spoken words, owing to the existing tone

gaps. He advocates stimulation of these gaps by appropriate loud sounds with the speaking tube, as practised by Urbantschitsch.

He explains the mechanism of hyper-rhinolalia and hypo-rhinolalia. He has discovered that it is not the whole nose cavity but, essentially, the nasal passages which are responsible for the normal nasal intonation and, for cases of cleft palate, he has devised a metal obturator which is fixed to the teeth by a short plate and projects into the nose. The projecting part has either two laterally projecting horns, or consists of a plate with a large central hole. This instrument has proved to be eminently successful.

Whilst barely alluding to the multiple speech defects which are of laryngeal origin, Fröschels confines himself to a consideration of the functional disorders, especially the so-called "functional vocal asthenia", which he considers to be, chiefly, the result of over-use of the vocal organ. To a small extent this abuse is very common and, in professional voice users especially, nervous symptoms are apt to supervene which, by inducing fresh effort, serve to accentuate the trouble. In consideration of its extraordinary prevalence, Fröschels asks himself whether, in fact, nature has so badly taxed the vocal organ or whether it may not be due to the imitation from generation to generation of increasingly bad habits of speech. The attempt to explain the speech and voice as having originated out of the natural cry and to get the patient to reproduce this natural cry was found in practice to be a surprisingly rapid means of removing the hyper-function.

It is, therefore, possible by this simple mechanism to build up a vocal therapy which obviates the necessity for any kind of apparatus. J. B. HORGAN.

Rhabdomyoma of the Larynx. Report of a case. CHARLES J. IMPERATORI. (*Laryngoscope*, 1933, xliii., 945.)

The author states that no cases of rhabdomyoma of the larynx have yet been reported in the literature, and describes a unique case.

The patient, a man of 23, had increasing hoarseness for ten months. Examination showed a lobular sessile growth, the size of "two green peas", reddish in colour, attached to the superior surface of the posterior one-third of the left cord. There was no sign of infiltration. The right cord seemed to be normal.

The mass was removed under local anæsthesia, with cup and biting forceps by endoscope. It was in size 15 by 7 by 6 mm., coarsely papillary and firm. The cut surface was pale yellow and homogeneous. Microscopic examination showed a stroma of spindle cells having the structure of striated muscle fibres—a typical rhabdomyoma.

There was no recurrence and the patient's voice rapidly returned to normal. F. W. WATKYN-THOMAS.

Larynx

A Few Cases of Isolated Laryngeal Tuberculosis. O. STRANDBERG. (*Z. Laryng.*, 1934, xxv., 226-32.)

The author once more raises the question whether tuberculosis of the larynx can arise as an isolated or primary lesion. It appears that such cases are being observed more frequently in recent years. Four cases are described :

Case I was a woman, aged 49, with a laryngeal swelling which was proved to be tuberculous in nature by histological methods. The patient died from pneumonia, and the *post mortem* made it possible to prove that no tuberculous focus was present in any other organ.

In the second patient there was a tumour of the right vocal cord and the first diagnosis had been carcinoma. The examination of an excised portion showed tuberculosis. The patient received light treatment, etc. and recovered. No other tuberculous focus could be demonstrated by any of the well-known clinical methods.

Cases III and IV were similar in nature. The laryngeal swellings were excised and shown to be tuberculous. In both patients the larynx healed quickly and there were no recurrences.

None of the four cases had any tubercle bacilli in the sputum. They show that it is quite possible to have a laryngeal lesion as the only evidence of an infection by the tubercle bacillus. The author concludes that the sputum infection theory of tuberculous laryngitis is seriously undermined.

J. A. KEEN.

On Aspiration-metastases (implantation-) in the Bronchi and Lungs in cases of Laryngeal Carcinoma. E. VON ZALKA. (*Arch. Ohr-, u.s.w., Heilk.*, 1934, cxxxviii., 164-9.)

Many authors question the possibility of implantation metastasis by inhaled tumour cells and explain such cases as a lymphatic spread. A preparation of larynx, trachea and lung obtained *post mortem* is illustrated and described in the present article. The larynx was completely destroyed by carcinoma. The trachea and intervening lymph glands were free from growth.

In the main bronchus of the right lung a small sessile tumour was found without any infiltration of the wall of the bronchus or of the neighbouring lymphatics. Similar foci were found in the remaining smaller bronchi on the right and left sides. Also several foci which had arisen from alveolar deposits and had involved the substance of the lung.

All these foci showed the typical structure of carcinoma and were undoubtedly metastases of the primary laryngeal tumour. Microscopic section of the smaller bronchial foci showed that the infiltration by tumour cells was strictly limited to the superficial layers of the mucous membrane ; at the sides, the intact mucous membrane

could be seen penetrating under the edge of the tumour deposit. These findings are strong evidence in favour of a surface implantation of inhaled tumour cells.

In this case there were also secondary deposits in the kidneys. These are explained as blood-stream metastases from the secondary alveolar deposits and not from the primary laryngeal tumour. The reason for this interpretation is that the author found carcinoma cells in a lung vein near one of the lung metastases, but no tumour cells were found anywhere in the lung arteries.

J. A. KEEN.

ŒSOPHAGUS AND ENDOSCOPY

Carcinoma of the Œsophagus with Fistula into the Air-passages. W. G. SCOTT-BROWN. (*Lancet*, 1934, ii., 544.)

The author describes four cases of œsophageal carcinoma with this complication. Their ages were respectively 59, 59, 46 and 65. From these he deduces that in any case of carcinoma of the œsophagus in which "cough", "sputum" and "bronchitis" are prominent symptoms, and particularly when these symptoms are aggravated by taking food, a fistula should be suspected. The apparent good health of the patient will be misleading, so long as it is generally thought and taught in the text-books that such a perforation is associated with a rapid onset of broncho-pneumonia and death. In one of the author's cases the fistula probably existed for from two weeks to three months before the patient reported at hospital. In a second case the patient lived for five weeks after the diagnosis was definitely made, having probably perforated five weeks previously.

MACLEOD YEARSLEY.

Some Disorders of the Œsophagus. ARTHUR F. HURST. (*Jour. A.M.A.*, February 24th, 1934.)

The writer discusses four œsophageal syndromes and reports four illustrative cases. The first is the dysphagia found in nervous anæmic women, and is regarded as a complication of simple achlorhydric anæmia. The dysphagia is the result of the disturbance of the neuro-muscular mechanism at the opening of the œsophagus when spasm often replaces the normal relaxation. They readily clear up with the passage of mercury bougies of increasing diameter when accompanied by general medical treatment.

The second group is achalasia of the cardiac sphincter (so-called cardiospasm). In these cases there is often enormous dilatation and hypertrophy of the œsophagus without organic obstruction. This apparently functional disease is the result of organic disease of

Auerbach's plexus and is, in fact, the only well established example of localized disease of the autonomic nervous system. In the large majority of cases it can be cured by the use of a wide tube containing mercury.

The third syndrome is chronic peptic ulcer of the œsophagus. The diagnosis can be made by X-ray, œsophagoscopy, and the presence of occult blood in the stools. These patients get great relief from milk diet, alkalis, and atropine, but the author feels an early temporary gastrostomy is advisable.

The fourth is the recurrent hiatus hernia of von Bergmann. The hernia is generally intermittent but may become fixed and permanent. It is never recognized by routine radiological examination, but may be successfully demonstrated by the use of barium and X-ray when the patient is lying flat on his back. These patients are made comfortable by the avoidance of a carbohydrate diet and not lying flat on their backs.

ANGUS A. CAMPBELL.

Treatment of Acute Pulmonary Abscess. S. U. MARIETTA. (*Jour. A.M.A.*, April 28th, 1934.)

In a long ten column article the writer reports fifty cases of pulmonary abscess in which more than 50 per cent. got well with medical treatment alone. The essential feature of the medical treatment was postural drainage. Three cases, one of which was due to foreign body, were treated by bronchoscopy. "Bronchoscopy is particularly indicated if drainage is obstructed by thick inspissated secretion, granulation tissue, inflammatory exudate, or massive necrotic tissue blocking the draining bronchus." The writer feels that more use should be made of bronchoscopic drainage and that some of his cases that went on to operation might have been cleared up by its use.

ANGUS A. CAMPBELL.

MISCELLANEOUS

A Further Contribution to Specific Therapy and Allergic Reactions in Actinomycosis. EDWARD NEUBER. (*Wiener Klin. Wochenschrift*, Nr. 23, Jahr 47.)

This is the record of a case of severe abdominal actinomycosis. The tumour, in the inguinal region, had previously had surgical treatment. The patient was very debilitated when admitted to hospital. Intracutaneous vaccination was carried out with a specific vaccine which caused local, focal, and general specific allergic reactions. Control injections with physiological salt solution in the patient and control injections of the vaccine in a second

individual did not cause any reaction. Auto-, or at least polyvalent, vaccine must be used to attain the desired end.

The specific vaccine therapy was completely successful in the case described, the patient being quite cured aften ten vaccinations with doses ranging from 0·1 to 0·9 c.cm. of the vaccine.

Three photogravures accompany this article.

J. B. HORGAN.

Perforations of the Hard Palate by Dental Plates with Suction Attachments. A. HERRMANN. (*Z. Laryng.*, 1934, XXV., 204-8.)

The author reviews the literature of this rare condition and describes three personally observed cases. A perforation can occur only in persons who wear their dentures permanently ("Intensivträger"). Syphilis and carcinoma must be excluded before making the diagnosis. J. A. KEEN.

Studies of Surface Anæsthesia. B. FREYSTADTL. (*Acta Oto-Laryngologica*, XX., fasc. 1-2.)

The author has already reported the results of his researches on the comparative values of various local anæsthetics, with reference particularly to the rapidity, duration and intensity of their action when applied to mucous membranes. In the present paper he deals with their power of penetration.

The various surfaces of the body offer very different degrees of resistance to penetration by anæsthetic solutions. Resistance is least on those surfaces which, like the pleura and peritoneum, are completely protected under normal conditions. It becomes progressively greater on other surfaces in the following order: the mucous membrane of the urethra and bladder, the surface of the cornea, the mucous membrane of the nose, the pharynx, the larynx and the tongue. It is greatest on the red portion of the lip, the tympanic membrane and the surface of the normal skin.

The author devised a method for measuring the intensity of the anæsthesia, which, he believes, permits a greater degree of accuracy than those hitherto employed. It is founded on the observation that the first sensation to disappear is that of cold, then that of pain, then touch and, finally, heat.

The first effect, for example, of the application of carbolic acid to the skin of the red portion of the lip is a rapid disappearance of the sensation of cold and, later, those of touch, pain and heat are lost. In this case it is of interest that a watery solution proves much more effective than a solution in glycerine.

The application to the skin of highly concentrated anæsthetics gave remarkable results, some of them of practical value. Cocaine and tutocain proved quite ineffective, alypin feeble, percain,

pantocain and psicain much more effective. The action requires a comparatively long time for development; time being a more important factor than concentration. Consequently application as an ointment is often to be preferred.

An 8 per cent. watery solution of pantocain, applied to the tympanic membrane for twenty minutes, allowed the performance of a painless paracentesis, and relieved the pain in cases of myringitis bullosa. The pain of otitis externa was greatly diminished by the application of a 1 per cent. percain or 1 per cent. pantocain ointment, which also abolished pruritus of the external meatus and other parts of the body.

THOMAS GUTHRIE.

A Syringe designed for injection and aspiration by Pressure of the Thumb. B. GRIESSMANN. (*Arch. Ohr-, u.s.w., Heilk.*, 1934, cxxxviii., 191.)

The danger in local anæsthesia is the injection of the solution directly into the blood stream. By aspirating first, when the needle is in place, this danger can be avoided to a large extent. The author has invented a special syringe (see illustration) where the same movement of the thumb can produce opposite movements of the piston. There are two levers on the far end of the piston rod. By pressure of the thumb on one or other lever one can aspirate or inject at will, without having to use the other hand.

J. A. KEEN.

A New Method of Testing Taste and Smell. T. TH. DUSSIK and O. KAUDERS. (*Wiener Klin. Wochenschrift*, Nr. 24, Jahr 46.)

The tests were made by the intravenous injection of one of the following substances: Camphaquin Menthol (1 c.cm. of a 10 per cent. alcoholic solution), Quinine, Decholin. The following advantages are claimed:

1. The sensory organ is excited by an exact dose which can be graduated down to the lowest extent. From this it follows that the examination can be made independently of prevailing extraneous circumstances such as humidity and temperature.

2. The examination is independent of the conditions prevailing in the nose itself at the time of the test.

3. It allows the examiner to ascertain exactly any difference between the olfactory function of the two sides.

4. For purposes of neurological examination a number of facts become evident which do not concern differences of quantity alone but also allow a fuller estimation of the functional activity of the sensory area concerned.

J. B. HORGAN.

Letters to the Editor

Argyria. HUGH K. BERKLEY. (*Jour. A.M.A.*, January 20th, 1934.)

The author reports two cases of argyria. The first patient, a girl aged 10, had used neosilvol drops in the nose two or three times a day for two years. There was no history of other medication. The uncovered portion of the skin became a dusky slate colour, more accentuated under the eyes and about the lips and nose. The sclerae showed a very definite slate colour. The second patient, a girl aged 7, used a 15 per cent. solution of neosilvol constantly for a period of two years and occasionally for a period of four years. The uncovered portions of her skin, especially under the eyes and at the side of the nose, developed a marked bluish discoloration. Both patients complained of anorexia, nausea, and nervousness. These cases were seen by a number of physicians who claimed that the diagnosis of under-nutrition and argyria was undisputed. The writer mentions a similar case, reported by Royster in 1932, and three cases reported by Woodward in 1933, and feels that six cases of argyria occurring in widely separated localities in less than one year should lead physicians to exercise more care in the prolonged use of colloidal silver preparations and to warn their patients against their continuous use.

ANGUS A. CAMPBELL.

LETTERS TO THE EDITOR

TO THE EDITOR,

The Journal of Laryngology and Otology.

SIR,—As a curious and interesting coincidence, the following may be worth relating. I have just read in "Abstracts" (page 480 of your July number) the following: "Complete bilateral nerve deafness following fracture of the base of the skull is a rare event. The case reported here was that of a youth, 19 years of age, who received a blow on the forehead which rendered him unconscious for ten days."

About an hour previous to reading this a man of 59 years of age was brought to me by his sister on account of deafness. He was stone deaf in each ear. He could feel vibrations of the tuning fork C.32 on his skull bones, and could feel vibrations, as from stamping on the floor. He had a very slight spontaneous nystagmus on turning his eyes in any direction. I did not do a caloric test, but a rotation test produced no results from turning in either direction.