the broken point ; but a further examination later, showed it to be lying in the stomach.

Fortunately, in thirty-six hours' time, the needle was passed without difficulty *per vias naturales*.

That such an accident was possible could of course be well understood, but the exhibitor had at once urged the instrument makers to take steps to obviate such an occurence in the future.

The point, however, which he wished to raise at present, was whether under such circumstances it were better to perform the tonsillectomy as the anæsthetisation was already commenced, or, to postpone such an undertaking.

He himself wished to state very definitely that such operation should be postponed, if only for the simple reason that the best line of treatment for such foreign bodies was the usual diet of cabbage, potatoes, etc., and which of course it was impossible to give after a recent tonsillectomy.

ABSTRACTS

EAR

Tinnitus on an Allergic Basis. ELSE LEVY. (*Z. Laryng.*, 1932, xxiii., 410.)

The patient, a woman aged 49, had suffered from tinnitus for over thirty years. There was a strong family history of allergic diseases. The patient herself was sensitive to various articles of food, but more particularly to dogs' hair. After removing dogs from the house and all traces of dogs' hair, the tinnitus promptly ceased. The author discusses other cases from the literature, also the relation between the Ménière syndrome and vasomotor disturbances of an allergic type.

J. A. KEEN.

Paralysis of a Vocal Cord as the first sign of a true Cholesteatoma in the Temporal Bone. H. TAEGEN. (*Z. Laryng.*, 1932, xxiii., 432.)

The patient, aged 56, had a history of double otitis in childhood but the ears had been dry for twenty years and the otitis was not connected with the later developments. In 1908 there was a period of illness with hoarseness, dysphagia and severe headache. An atrophy of the left sterno-mastoid and trapezius muscles was found, and pressure on the ninth, tenth and eleventh cranial nerves was suggested as a cause. These symptoms gradually cleared up.

Fresh symptoms did not arise until 1929, when the author found a small non-inflammatory swelling on the posterior wall of the left auditory meatus, the tympanic membrane not being involved. A few months later a sinus was found in the same area, and when a probe was inserted it reached a very large cavity in the mastoid process. White particles discharged through the sinus, but there was no fœtor and no tenderness on pressure over the mastoid. The author therefore made a diagnosis of a true cholesteatoma (primary); the existence of a large bone cavity was confirmed by an X-ray photograph and later at operation.

Further signs were a left-sided paresis of the soft palate, interference with the sense of taste over the left side of the tongue, and paralysis of the left vocal cord, which was immovable in the cadaveric position. This constitutes Vernet's syndrome (also called Avellis Tapia's syndrome) and is due to a lesion of the ninth, tenth and eleventh cranial nerves at their exit from the skull. The very large cholesteatoma had produced a compression of these nerves at the jugular foramen.

True cholesteatoma, not due to an ingrowth of epithelium, is a rare tumour. One combined with Vernet's syndrome has probably never been described before. J. A. KEEN.

The Question of Trauma of the Cochlea by Bone-conducted Sounds. H. BARTH. (*Z. Laryng.*, 1932, xxiii., pp. 412-7.)

This is another of a series of articles in which conflicting views are discussed. The Siebenmann school maintains that the cochlea can be damaged by only air-conducted sounds. The original experiments were made with guinea-pigs in which the incus had been removed on one side. After exposing the animals to intensive whistling and hammering sounds, the cochlear degeneration occurred only in the undamaged ear, thus proving that only air-conducted sounds could cause cochlear degeneration.

Professor Wittmaack, on the other hand, holds that two forms of acoustic trauma are possible, that is by air-conducted and bone-conducted sounds with distinctive lesions in the cochlea (see Abstract of article in *Archiv. Ohr.*, u.s.w. Heilk., 1932, cxxxiii., 181).

It becomes increasingly difficult for the ordinary reader to judge the *pros* and *cons* of the various theories, because the points which are raised often concern details of the construction of the apparatus used for producing the sound injuries. e.g. in some of Prof. Wittmaack's experiments the guinea-pigs were placed in small metal containers which were set into vibration by a large electrically driven tuning-fork of thirty-six double vibrations. According to Wittmaack this sound is too low to produce any effect by air-conduction. The lesions in the cochlea which resulted were therefore produced by bone-conducted sounds.

Dr. Barth repeated these experiments with negative results. In a second series of experiments the intensity of the sound was increased and he then found cochlear lesions which resembled those of Wittmaack's "bone-conducted trauma". However, the author is not satisfied that air-conduction is excluded under those conditions. He concludes that the original view attributed to Prof. Siebenmann is still the correct one, viz. that the cochlea can be damaged only by air-conducted sounds.

J. A. KEEN.

The Treatment of Chronic Suppuration of the Mucous Membrane of the Middle Ear by means of Chlorine Gas. FRANZ MOSSBÖCK. (*Wiener Klin. Wochenschrift*, Nr. 3, Jahr. 46.)

The chlorine gas is led from the gasometer to the ear by means of a rubber tube provided with a glass olive. The patient, whose ear has been suitably cleansed of secretion, is in the prone position. The gas is allowed to flow down into the ear (it is two and a half times the weight of air) for from 10 to 20 seconds. The patient's respiratory passages are protected by a pad which has been wetted with 10 per cent soda solution and is held before the mouth and nose. The glass olive is now replaced by a solid dummy olive and the gas is retained in the meatus for about five minutes. The gas used is mixed with an equal volume of air. The patient experiences a slight sensation of warmth in the ear which persists for a couple of hours. The treatment is carried out daily, or every second day.

A long series of chronic uncomplicated cases of middle-ear suppuration with mesotympanic perforation were successfully treated by the writer. The permanency of the results was controlled by subsequent extended observation.

The antiseptic property of chlorine depends upon the production of oxygen *in statu nascendi* from the hypochlorous acid which results from the decomposition with water. In this way a small quantity of hydrochloric acid is also formed. This decomposition, however, soon comes to a stop because the reverse process quickly ensues, and the hydrochloric and hypochlorous acids are again converted into chlorine and water.

Any small quantity of gas which escapes, quickly sinks to the floor, and in this way the attendants are protected. Lately the administration has been improved by the use of a gas-tight syringe of 100 c.cm. capacity.

The gasometer (of which a diagram is given) can be supplied by the firm of Haak in Vienna, the gas-tight syringe and the glass olive (which are also illustrated) are obtainable from the firm of Schutta in Graz.

J. B. HORGAN.

Abstracts

Aural Vertigo : Treatment by Division of Eighth Nerve. H. CAIRNS and W. R. BAIN. (*Lancet*, 1933, i., 946.)

The writers report four cases of severe aural vertigo treated by division of the auditory nerve after other methods had failed. (Destruction of the labyrinth, introduced by Lake, does not appear to have been tried.) The surgical approach to the nerve, by the cerebello-pontine angle, and the indications for operation are described. All four patients (males) appear to have been relieved by the operation and were able to return to work. The physiological effects—vertigo, vomiting, nystagmus, and transitory diplopia—are discussed. The authors wish to make it quite clear that they do not advise the operation for all cases of vertigo or even for all cases of aural vertigo.

MACLEOD YEARSLEY.

An Unusual Concomitant of Acute Mastoiditis. MACLEOD YEARSLEY and A. P. PIGGOT. (*Lancet*, 1933, i., 801.)

The case reported is that of a woman, aet. 51, admitted to St. James's Hospital with acute mastoiditis on the left side. Following operation, she developed obscure cerebral symptoms and an exploratory operation was performed, but had to be abandoned owing to the partial collapse of the patient, who lapsed into coma and died in a few hours. The necropsy showed no otogenetic cerebral complication, but a large subarachnoid hæmorrhage, due to a leaking intracranial aneurysm, about the size of a large pea, situated at the junction of the left internal carotid, and anterior and middle cerebral arteries.

AUTHORS' SUMMARY.

The Operative Treatment of Facial Palsy. SIR CHARLES BALLANCE and ARTHUR B. DUEL. (Reprinted from *The Archives of Oto-Laryngology*, January, 1932.)

This important article, occupying seventy pages in the reprint, constitutes a careful and elaborate study of the whole subject of the operative treatment of facial paralysis. An abstract can deal only very inadequately with the matters so fully discussed therein.

Anastomosis operations are never entirely satisfactory, on account of the partial or total paralysis of the nerve used for grafting into the facial, and of the associated movements of the muscles supplied by this nerve. The operation of direct repair of the facial by exposing it in the Fallopian aqueduct, resecting the damaged portion, and inserting a graft from another nerve is advocated as being the ideal procedure. Only a single case is quoted in which this has been done in the human subject, the operation being performed by Dr. Duel in 1930. The patient was a child, aged 9

months, whose face was paralysed as the result of a mastoid operation. The graft, 27 mm. long, was taken from the external respiratory nerve. Recovery of function was practically complete in three months. This scanty clinical experience is supplemented by the record of seventeen experimental operations on animals: baboons, monkeys, and cats. In all of these complete, or almost complete recovery took place after periods varying from three to six months.

The operation, though extremely delicate, is straightforward in its main features. The essential requirements are a good illumination, and a thorough acquaintance with the anatomy of the parts. A complete mastoid operation is done, with removal of the posterior wall of the bony meatus, and of sufficient of the floor to give a good exposure of the tympanum. Dissection is carried down into the neck below the mastoid, to expose the point of emergence of the nerve at the stylo-mastoid foramen. When this is done, the course of the nerve from the " bend ", lying between the oval window and the prominence of the external semicircular canal, and the stylo-mastoid foramen can be visualised, and careful planing away of the bone along this line lays open the aqueduct along its length. The next stage is decompression of the nerve. The authors recommend that the sheath should be freed from the bone at the stylo-mastoid foramen, where it is adherent, and that it should be slit up to expose the damaged portion of the nerve. If the injury is found to be severe, a sufficient length of the nerve is then resected by a clean cut above and below, made with a fine cataract knife. The graft destined to repair the defect is taken from the external respiratory nerve, which is readily exposed in the axilla, lying on the serratus magnus muscle. Usually a length of about 5 mm. will suffice to fill the gap in the facial. The cut ends of the respiratory nerve should be sutured together, and no permanent paralysis of its muscle supply need be feared. The graft is laid in the aqueduct between the cut ends of the facial. Sometimes it may be necessary to suture the lower end of the graft to the distal end of the facial with a single, very fine thread. The repaired nerve is covered with a layer of gold leaf, or thin platinum foil. In most of the experimental operations the mastoid cavity was filled with a muscle graft taken from the temporal muscle, but the writers express themselves as not convinced of the necessity of this procedure.

The indications for the operation are stated uncompromisingly. Whenever facial paralysis follows operative injury, or suppurative disease, the operation described here should be performed without delay. Recovery may be possible without operation, but it cannot be counted upon, and if it does occur, it may be incomplete. When the muscles of the face have lost their reaction to galvanism no improvement can be looked for. Sepsis is not a contra-indication,

as it can be eliminated by a sufficiently thorough mastoid operation with careful cleansing of the tympanum, followed by skin grafting of the cavity. Peripheral nerve anastomosis operations should be reserved for cases in which there is extensive damage to, or loss of bone, such as may occur in fractures of the base of the skull involving the petrous, or in tuberculous caries.

G. WILKINSON.

Clinical Experiences in the Surgical Treatment of Facial Palsy. ARTHUR B. DUEL (New York). (*Archives of Oto-Laryngology*, December, 1932.)

The author amplifies the clinical material quoted in the above paper by a preliminary report on eleven additional cases treated by the Ballance-Duel operation. In most of them the time which has elapsed since the operations is insufficient for the final result to be forecasted with certainty. The case reports are illustrated by photographs of the patients' faces, in repose and in action. Of the eleven cases, the result in three is distinctly favourable (cases 2, 4 and 10). In case 2 immediate complete paralysis of the face followed the radical mastoid operation. Eleven months later the damaged section of the nerve was resected, and replaced by a graft 30 mm. long. Spontaneous movements of the face began eight months later, and a photograph taken three months after that shows nearly complete recovery of function. Further improvement will no doubt take place. Case 4 is in a different category in so far as the paralysis was bilateral and non-traumatic. A girl, 21 years old, had had Bell's palsy on the left side 10½ years before, with partial recovery. This was succeeded by a paralysis of the right side, which also partially recovered. She then suffered a second, complete, paralysis of the left side. A decompression operation, without grafting, was done on both sides. After exposing the nerves in the aqueduct, the sheaths were slit up longitudinally. As soon as this was done, it was noted that the nerves immediately swelled up to about twice their previous bulk. Five and a half months later recovery was almost complete. Case 10 was one of compression of the nerve in the aqueduct by the driving in of a lamina of bone during the performance of a mastoid operation. A decompression operation was done two days later. Recovery of function was nearly complete in three months. Some of the other cases were very unpromising for operation, being of long standing, with extensive damage to the nerve. Nevertheless all of them showed some signs of improvement at the time of reporting, but in none of them has the time since the operation been sufficient for much to be expected of them. The operator promises a further report in twelve months' time. Further experience of the operation in human subjects has brought out one or two points of interest. The length of the graft required in the

majority of cases has been considerably greater than those used in the animal experiments, e.g. 15 to 40 mm. It has been found more convenient in practice to use a graft taken from one of the intercostal nerves, rather than one from the external thoracic. The tenuity of the graft is, to a certain extent, an advantage. When placed in position it has to be nourished by seepage until it becomes vascularised, and consequently central degeneration is less likely to take place in the case of a thin than of a thick graft. The graft may be used double if, as is usually the case, its diameter appears to be less than that of the nerve which it is to replace.

G. WILKINSON.

Damage Caused by the Intra-Spinal (Lumbar) Injection of Trypflavine. G. EIGLER and W. GEISLER. (*Münch. Med. Wochenschrift*, Nr. 12, Jahr. 80.)

The drug was administered in two cases of rhinogenous and in one case of otogenous meningitis in human patients, it was also administered to two Jaffa apes the day after meningitis had been induced. All cases exhibited evidence *in vivo* of serious injury to the spinal cord, which was confirmed by direct evidence on *post mortem* examination. The conclusion is reached that the intra-spinal injection of trypflavine solution is a very dangerous procedure, even though it cannot be denied that the suppurative process is favourably influenced to some extent. This favourable influence, however, is more than offset by the serious paralysis of the lumbar centres which results. The influence of the drug, moreover, as proved by *post mortem* examination, extends only as far as the base of the brain and, even if administered in concentrated form, is unable to reach the infective focus in rhinogenous and otogenous cases.

J. B. HORGAN.

NOSE AND ACCESSORY SINUSES

Adamantinoma of the Upper Jaw. H. GENTSCH. (*Arch. Ohr-, u.s.w., Heilk.*, 1932, cxxxiii., pp. 312-33.)

Adamantinoma of the upper jaw is an extremely rare tumour. Only twenty-four cases were traced in the whole literature; to these the author adds the present case which he claims is the largest of these tumours yet described (size of a man's fist). An illustration is found in the text, with reproductions of microscopic sections.

Adamantinomas belong to the neoplasms connected with the tooth germs (odontomes) and are more especially derived from the epithelial cells of the enamel organ. The embryology of the tooth germs in relation to these tumours is fully discussed. The adamantinoma arises from the epithelial lining of the enamel organ which

continues as a single layer towards the roots of the teeth. The primary lesion is most likely a septic process in the roots, as in nearly all the cases recorded the patients have lost most of their teeth. Some of the epithelial cells may remain in the alveolus and later begin to proliferate. The strands of cylindrical cells which are such a characteristic feature of the adamantinomas show a very close resemblance to the cylindrical epithelial layer of the enamel organ in a tooth germ.

The tumours may be solid or cystic, but cystic changes are the rule as soon as the tumour reaches a certain size. As regards the upper jaw, adamantinomas begin in the alveolar process in the region of the molars. Bone is absorbed by pressure-atrophy and the first indication of a swelling is in the region of the canine fossa. Later the tumour fills the antrum and then begins to encroach on the ethmoid and sphenoidal sinuses and the orbit. In the present instance the operation showed that the tumour had reached the base of the skull and an area of dura was exposed. When the bone of the superior maxilla has been absorbed down to a thin layer, the typical " parchment crackling " can be felt.

Adamantinomas grow slowly as a rule, in the present instance the clinical history extended over four years. Metastases are extremely rare, but the tumours are locally malignant. Unless every trace of tumour is removed by operation, recurrences may be expected.

J. A. KEEN.

The Surgery of the Nasal Accessory Sinuses with Special Reference to Pansinusitis. E. MATIS. (*Zeitschrift für Hals-Nasen-und Ohrenheilkunde*, 1933, xxxii., 16.)

The author surveys the various methods of opening the nasal accessory sinuses, and dismisses the external operations of Killian and Moure on account of excessive hæmorrhage and consequent facial scar. He discards the usual intranasal route on account of the difficulty of dealing with the sinuses in a radical fashion.

He then proceeds to describe his own operation. This, performed under local anæsthesia, consists essentially of an intranasal approach to the various sinuses through an incision in the lateral nasal wall immediately posterior to the vestibule, giving free exposure of the canine fossa, and the ascending process of the maxilla.

The antrum is then opened by removing a portion of the anterior wall and a flap of mucous membrane of the inner nasal wall is freed and turned down. Then, by the reflection of the soft parts in the region of the lachrymal sac, the nasal process of the maxilla is resected and the floor of the frontal sinus opened. By the removal of a portion of the lachrymal bone, the ethmoidal cells are exposed and dealt with and, by working backwards, the sphenoidal sinus.

Incidentally he suggests that this route may be found convenient for operative procedures on the pituitary gland.

He adds that if the operator finds the field limited in area, an additional incision in the upper lip, and reflection of the cheek will be a help.

Fourteen clear figures and illustrations indicate graphically the details of the operative procedures he suggests, but for which he gives no case reports.

H. B. LIEBERMAN.

LARYNX

Carcinoma of the Larynx. L. H. CLERF and B. L. CRAWFORD. (*Archives of Otolaryngology*, November, 1932. Vol. xvi., No. 5.)

This paper, illustrated by twelve excellent photomicrographs, deals with the early diagnosis by means of biopsy, which should be performed in every suspicious case. The objection to this procedure is largely theoretical, as there is no definite proof that it favours the spread of the growth. A rapid paraffin method is employed and a number of serial sections are studied at different levels. When the malignant nature of the growth is proved, operation is promptly carried out. In the thirty-two cases studied by the writers, a histological grading according to Broder's classification was not possible. The two extremes of low grade and of high grade malignancy could be recognised, but the intermediate groups (types 2 and 3 of Broder) could not be classified definitely.

Sufficient emphasis has not been laid on the fact that early metastasis does not occur in cancer of the larynx. This fact has not yet been explained on anatomical grounds, as the larynx is said to be abundantly supplied with lymphatics. The absence of metastasis and the favourable results of operation ought to stimulate surgeons to strive for more thorough investigation of all suspected cases. Details are given of two such cases, one of which was proved to be definitely cancerous after being under observation for three years, the other, apparently a case of pachydermia, cleared up under treatment by vocal rest.

DOUGLAS GUTHRIE.

Epithelioma of the Larynx in Early Life. GEORGES PORTMANN and RAYMOND PHILIP. (*Revue de Laryngologie*, January, 1933.)

The authors have had two cases falling under this category during the last five years; one in a man of 30 and the other in a girl of 12. In the same period they have also had a case of epithelioma of the naso-pharynx in a boy of 15.

In a search through the literature of the subject they have found records of only eight cases from 1895 to 1925, and of twelve cases, including their own two, from 1926 to the present year.

They sum up the features characteristic of precocious cancer of the larynx as follows :—

Epithelioma of the larynx is rare before the age of 30, and is relatively less common than epitheliomas in other regions, such as the alimentary tract, the liver, and the skin. Under the age of 20, females are attacked oftener than males, but after that age the frequency of incidence in the sexes is reversed. In the young, these growths frequently seem to be preceded by polypi or papillomata. They occur most frequently in the region of the arytenoids and posterior part of the vocal cords. Extrinsic cancer is rare, and is usually the result of extension of endolaryngeal growths. Microscopic sections show all the signs of rapid cell growth and proliferation. Clinically, their spread is rapid, and varies inversely with the age of the subject. The first symptom is hoarseness of the voice, or even aphonia. Dyspnœa sets in early, and emergency tracheotomy is frequently required. Pain and dysphagia are usually later symptoms, but are much earlier in their onset than in the ordinary case of mature age. In the later stages, rapid wasting and deterioration of the general health supervene. The average duration of the disease is from one year to eighteen months. Metastases are exceptional. The only real obstacles to the diagnosis are the difficulty of obtaining a view of the larynx in many young people, and the rarity of cancer in such patients. A biopsy is often required to demonstrate the exact nature of the disease. The authors are of the opinion that operative removal at the earliest possible moment after the diagnosis is established is essential, unless the case is already too far advanced. Total laryngectomy will usually be required. The use of X-rays and radium should be considered subsidiary aids to surgical removal. Young patients are favourable subjects for operation, apart from the question of recurrence, in which respect the prognosis is not good. Recurrence is usually local.

G. WILKINSON.

TONSIL AND PHARYNX

Experimental and Histological Investigations into the Tonsil Question, a Criticism of Previous Views. R. WALDAPFEL (Vienna). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, vol. xxxii., Part 4, p. 400.)

It seems certain that infection can be carried from the nose (especially the turbinated bodies) to the tonsils, not through lymphatic, but venous channels. Organic bodies are conveyed better

than inorganic, but bacteria better than any. To a smaller extent these substances reach the tonsil if injected into the venous circulation. Whatever other function the tonsils may or may not have they help, according to Waldapfel, in eliminating injurious substances from the blood.

JAMES DUNDAS-GRANT.

Lingual Goitre. E. F. ZIEGELMAN. (*Archives of Oto-Laryngology*, October, 1932. Vol. xvi., No. 4.)

The median diverticulum, which later becomes solid and ultimately becomes the thyroid gland, appears at about the fourth week of embryonic life. The upper extremity forms the foramen cæcum, the lower, in 40 per cent of cases, becomes the central or pyramidal lobe of the gland, and the lateral buds develop into the lateral lobes. Abnormal development may give rise to thyroglossal cyst or fistula, or to aberrant or misplaced thyroid tissue which may be lingual, prelaryngeal, pretracheal or retrosternal in position. Lingual goitre is rare. G. B. New collected ten cases at the Mayo Clinic. As a rule it does not cause symptoms in the infant, but with the growth of the patient it increases in size and causes discomfort, or even dyspnœa and dysphagia. A rounded tumour is then discovered in the posterior third of the tongue. It is median in position and shows veins on its surface, and sometimes a dimple at the centre represents the foramen cæcum. If it is an accessory structure, removal will cause no systemic disturbance, but unfortunately most lingual goitres are of the aberrant type and surgical treatment must not be lightly undertaken. Surgical diathermy is preferred to excision when removal is necessary.

A case is reported of a woman aged 48 in whom the tumour gave rise to obstructive symptoms which coincided with the onset of the menopause. The goitre was excised by the oral route, and this resulted in myxœdema which was held in check by thyroid administration. The paper is illustrated by four drawings and two microphotographs.

DOUGLAS GUTHRIE.

The X-ray Treatment of Chronic Tonsillitis. P. HESS. (*Münch. Med. Wochenschrift*, Nr. 10, Jahr. 80.)

The treatment is indicated in all cases of uncomplicated chronic recurrent angina of the tonsils. The smallest doses are employed, viz. a superficial dose of 1/3 E.D. and a focal dose of 1/5 E.D. There is an interval of one day between these doses. The success obtained may be compared to that which results from the X-ray treatment of chronic adenitis.

Of forty cases treated, twenty-one remained cured, three were temporarily cured, four were improved and three were uninfluenced.

Each case was radiated once only for each side. This was carried out whilst the patient was in the recumbent position with the head inclined slightly backwards and sideways. The bundle of rays entered at a point below the angle of the mandible and passed from the infero-lateral in a supero-internal direction. The success obtained is not due to the primary sterilisation of the tonsil tissues. This latter is indirectly effected by the organism itself because of the reaction resulting from the destruction of lymphocytes.

It is pointed out that subsequent operative removal of the tonsils, if requisite, is rendered more difficult by previous radiation.

J. B. HORGAN.

Toxic Hæmorrhage from the Branches of the External Carotid at an early stage in Acute Tonsillitis. TORSTEN SKOOG (Lund). (*Acta Oto-Laryngologica*, xviii., Fasc. 3.)

In an earlier work (Spontaneous Hæmorrhage of the Tonsil Region) the writer has reviewed the frequency, symptomatology and treatment of hæmorrhage complicating septic angina. Such bleeding takes place from erosions of vessels following phlegmonous inflammation of the peritonsillar tissues.

In this earlier work, however, the question of tonsillar hæmorrhages of purely toxic origin was not discussed fully. The case described is that of a man aged 27 years who had suffered frequently from acute tonsillitis with peritonsillitis. On this occasion bleeding took place into the mouth as early as the fourth day of the disease. The blood came from the right supra-tonsillar region with no evidence of pus formation. The right external carotid artery was tied with an immediately favourable result. An incision into the swollen area between tonsil and soft palate yielded only blood clot and no pus.

After a week, however, hæmorrhage took place from the other side. This was definitely superficial, from the left tonsil itself, and not from the peritonsillar area at all. This bleeding was controlled by injections of Hæmoplastin intramuscularly and by local applications of " Stypton ".

The question, therefore, presented itself whether the right-sided hæmorrhage could have been treated more conservatively in this particular case. The early occurrence of the bleeding might have suggested a simpler origin than erosion of vessels in the peritonsillar region but, on the other hand, the difficulty of making a certain diagnosis apparently justified the tying of the external carotid artery, even under difficulties due to the presence of a considerable acute lymphadenitis in the neck.

The patient made a good recovery. He gave no previous history of a tendency to unusual bleeding, and the tonsils were removed a month later without any complications. H. V. FORSTER.

Tonsil and Pharynx

The Pathogenesis and Differential Diagnosis of Post-Anginal Sepsis. HANS KLINTRUP. (*Acta Oto-Laryngologica*, xviii., Fasc. 3.)

In spite of considerable research on acute angina, there still remain differences of opinion as to the point of origin of the accompanying general infection, and by what paths it is first distributed. According to Fränkel the true septic focus consists of endophlebitis followed by thrombosis of the small veins of the tonsil; the process spreading later to the larger veins and the internal jugular. He regards as exceptional a lymphogenous distribution with lymph gland suppuration and subsequent venous thrombosis.

Claus believes that the septic focus consists of a perivascular phlegmon in the retrotonsillar connective tissue, the veins being secondarily affected.

In Uffenorde's opinion, on the other hand, the most usual form is that of a progressive phlegmonous inflammation in the lymphatic spaces of the *spatium parapharyngeum*, whence the veins are secondarily affected.

In the case which forms the main subject of this paper, the septic focus was in deep suppurating lymph glands, and the case was complicated by a suppurative otitis media on the same side. In the tonsil, which was the point of entry of the infection, neither macroscopic nor microscopic examination revealed anything which threw light upon the progress of the case. In the author's opinion the course of the disease in this case could best be explained by supposing purulent inflammation of the lymph glands arose from a tonsillogenous lymphangitis, and that this induced a purulent thrombosis in the neighbouring veins. The definite limitation of the thrombosis to those portions of the vessels which were in immediate relation to the inflamed lymph glands was in favour of this view.

The case was also of interest from a diagnostic standpoint. The presence of an otitis media on the same side as the lymph gland swelling suggested that the high temperature and rigors might be due to an otogenous thrombo-phlebitis, and the result of the Tobey-Ayer jugular compression test was such as to indicate the presence of a lateral sinus and jugular thrombosis. At the operation on the gland abscess, however, the jugular was found to contain fluid blood, but had been so much compressed by the gland mass that the Tobey-Ayer test gave the same rise in pressure of the cerebro-spinal fluid as occurs in the presence of a lateral sinus and jugular thrombosis.

The case illustrates the difficulties that may arise in determining the principal septic focus in cases of angina associated with otitis media and symptoms of general septic absorption.

THOMAS GUTHRIE.

Abstracts

ŒSOPHAGUS AND ENDOSCOPY

An Œsophago-Tracheal Fistula of Carcinomatous Origin. M. E. HINDES (Leningrad). (*Acta Oto-Laryngologica,* Vol. xviii. Fasc. 1-2.)

An examination of statistical reports which have been made from anatomical findings in alimentary carcinoma shows a large percentage of perforations into neighbouring organs.

In the thoracic region these occur most often into the air passages, lungs, bronchi, and trachea and next in order into the vascular system (heart, pericardium and vessels).

According to the anatomical material, perforations into the respiratory passages range from 15-30 per cent of the total. When clinical material is examined, however, the statistical results are quite different. In Wenglouski's 538 cases perforations were only diagnosed as follows :—three into the bronchi, three into the left lung, and two into the trachea.

The writer describes his case of a man aged 54, with a history of five months' dysphagia, but it was not until two days before seeking medical aid that he coughed on eating and vomited his food. Perforation into the trachea was diagnosed radiologically, the opaque barium material passing through into the trachea and then into the bronchi. The perforation was also confirmed by tracheoscopy and was found at a distance of 22 cm. from the edges of the upper incisor teeth.

Gastrostomy was performed seven days after the first symptom of perforation to avoid, if possible, inspiratory broncho-pneumonia. After the abdominal wound had healed, the exact nature of the tumour—a *carcinoma plano-cellulare* was proved by œsophagoscopy and biopsy.

Several references to the literature are given and two radiographs are shown.

H. V. FORSTER.

Bronchoscopic Localisation of Lung Abscess. RUDOLPH KRAMER and AMEIL GLASS. (*Annals of O.R.L.*, vol. xli., No. 4, 1932.)

The importance of correct surgical approach to a lung abscess through adherent pleura is stressed, and an attempt is made to secure more accurate localisation by means of the bronchoscope.

In an anatomical study it was found that the distribution of the bronchi within each lobe was constant, and that the area supplied by each bronchus might be mapped out on the chest wall. Pathologically, a lung abscess rarely invades more than one such "broncho-pulmonary segment", and the importance of the surface topography is, therefore, obvious.

A series of twelve cases illustrative of this paper, are quoted. A series of diagrams illustrate the mapping out of the different areas but, unfortunately, there are no directions given as to how the bronchi related to the segments may be recognised, thus rather spoiling what would otherwise be a very interesting paper.

E. J. GILROY GLASS.

The Röntgen Treatment of Primary Malignant Disease of the Tracheo-Bronchial Tree. PORTER P. VINSON and EUGENE T. LEDDY. (*Annals of O.R.L.*, vol. xli., No. 4, 1932.)

From May, 1925 to January, 1931, seventy-one cases of primary malignant disease of the tracheo-bronchial tree were diagnosed by the removal of tissue from the lesion through a bronchoscope.

Twenty-nine patients did not receive treatment and all of them are dead, the average duration of life being a little more than five months.

Forty-two patients were treated by radium or Röntgen rays, either under our direction or at their homes. Thirty-two of these lived for an average of eight months after positive diagnosis had been made. Ten patients who received Röntgen ray treatment alone are living, from fifteen months to four years after malignant tissue has been removed from the lesions.

The average duration of life has been twenty-three months. Abstracts of these ten cases are presented.

AUTHORS' SUMMARY.

Spondylitis of the Cervical Vertebrae as a cause of Dysphagia. C. WIETHE. (*Z. Laryng.*, 1933, xxiv., 54-8.)

It happens not infrequently that patients complain of difficulties in swallowing for which we cannot discover any cause. Before making a diagnosis of " neurosis " one should investigate the condition of the cervical vertebrae.

The author describes three cases in which the symptoms could be explained by chronic arthritic changes affecting the bodies of the cervical vertebrae. These changes were mostly in the form of bony projections in a forward direction; in one case the bony projection was so marked that one could see the swelling on laryngoscopic examination.

The X-ray photographs in the text with explanatory diagrams are particularly clear.

J. A. KEEN.

Abstracts

MISCELLANEOUS

Atypical Facial Neuralgia. TEMPLE FAY. (*Annals of O.R.L.*, Vol. xli., No. 4, December, 1932.)

Chronic attacks of deep, dull, aching pain in the eye, malar region, about the ear, and down the neck, worse at night and throbbing in character, have been found associated with tenderness to deep pressure over the arterial branches of the head and neck. The possible causes of such pain have been investigated by the author, who attributes it to irritation of the pain fibres from the sympathetic and vagus nerves running in the sheath of the carotid artery and its branches.

A case is described in which a patient presenting this type of neuralgia insisted on relief and, during the ensuing three years, had the following operations :—(1) Resection of the trigeminal root, (2) resection of the spheno-palatine ganglion, (3) ablation of the cervical sympathetic, (4) stripping of the common carotid artery, (5) section of the hypoglossus nerve, (6) section of the glosso-pharyngeal nerve. It was only, however, after the seventh operation, when the vagus fibres to the internal and external carotid artery were divided, that relief was obtained.

E. J. GILROY GLASS.

Affections of the upper Respiratory Tract allied to Asthma. HENRI BOURGEOIS. (*Les Annales d'Oto-Laryngologie*, October, 1932.)

The morbid conditions which are studied in this connection are those of spasmodic rhinorrhœa and spasmodic cough. Hay fever is the type of spasmodic rhinorrhœa the causes of which are best known. There is abundant evidence that hay fever is of general as well as of local origin. Not only is there a definite hereditary susceptibility, but the condition can be provoked experimentally by transfusion, and instances are quoted in which it was initiated by mental shock. Again, Lermoyez has shown that mild attacks can be induced by the ingestion of such substances as chocolate, strawberries, eggs, fish, etc. The multiplicity of agents capable of provoking spasmodic rhinorrhœa in susceptible persons makes it very difficult to ascribe a cause to any particular case. Exposure to cold is perhaps the most common predisposing factor. A patient is mentioned in whom the mere uncovering of the head precipitated a sneezing crisis. No credence is placed in the rôle played by the spheno-palatine ganglion in this affection, and the views of Sluder and of his disciples with regard to this ganglion in its relation to spasmodic rhinorrhœa and facial neuralgia, together with their treatment of these conditions, are not accepted. The symptomatology, diagnosis and treatment of this condition are described in

detail. Of the many forms of treatment which have been recommended, the author has found the following to be useful; fresh air and exercise, organo-therapy, auto-hæmatherapy, and auto-serotherapy, intranasal cauterisations and surgical correction of intranasal abnormalities. Of particular benefit is a course of treatment at Mont Dore: the writer recalls the remarks of Hurst made at the Royal Society of Medicine (1925) on the beneficial effect of intranasal injections of carbonic acid gas in cases of asthma and allied conditions.

The second part of the paper deals with spasmodic cough. Stress is laid on the unexpectedly good results to be obtained from continuous local anæsthesia of the upper respiratory tract.

M. VLASTO.

Ludwig's Angina. K. M. HOUSER. (*Archives of Otolaryngology*, September, 1932, vol. xvi., No. 3.)

The writer describes fifteen cases of Ludwig's angina or cellulitis of the sublingual space. Dental caries is the most frequent cause and the patients are usually young adult males. A study of the anatomy of the region involved suggests that in the early stages, before the neck has become involved, pus may be evacuated by intra-oral incision. Should this simple procedure fail, no harm has been done, and external operation may be carried out. This proved necessary in eleven cases of the present series. Two cases recovered after intra-oral drainage alone, and one after spontaneous rupture into the mouth. The one fatal case in the series was admitted in a state of coma. The limits and relations of the sublingual space are depicted in a series of seven frozen sections.

DOUGLAS GUTHRIE.

Notes on 1,500 *Cases of Asthma.* JAMES ADAM. (*B.M.J.*, May 28th, 1932.)

This survey touches on facts which may throw light upon some of the more important points.

In diagnosis, adrenalin will not ease the "asthmatoid" wheeze but usually gives prompt relief in genuine asthma. Eosinophils crowd the sputum in asthma and are scanty in the "asthmatoid" case. "Wheeze" *plus* eosinophilia is asthma, "wheeze" without it demands scrutiny of the diagnosis; "wheeze" *plus* tough viscid sputum crowded with eosinophils is asthma, "wheeze" *plus* purulent sputum with few eosinophils, but with many polynuclears, is not simple asthma. It is too often forgotten that asthmatic sputum is not purulent. Dyspnœa coming on typically between 2 and 4 a.m. or on waking, or after food, is not asthmatoid but asthmatic.

Abstracts

Eosinophilia :—Increase of eosinophils in the blood beyond 4 per cent has been the rule and, correlating count with " wheeze ", eosinophilia was found in 80 per cent. There is no better guide to diagnosis than the eosinophil count, and no better indication of progress under treatment than its fall, if we bear in mind that the percentage may vary quickly, rising before the attack and falling after it. Blood-pressure :—Normal pressure characterises most cases. Hyperpiesis was found in only 7·5 per cent of adult asthmatics in this series. Patients of this type often respond astonishingly to treatment found useful for asthma—regulation of diet, weekly fast and blue pill, dimol, and iodide and belladonna. Hypopietics are also a small class—10·7 per cent—but are often more refractory to treatment. Toxicosis :—It has been the author's opinion for thirty years that a toxic factor looms large in asthma and the truth of this he has tried to show on clinical grounds and by therapeutic results not equalled, to his knowledge, by any other method of treatment. The question whether there is acidosis or alkalosis is subsidiary to that of toxicosis. In this series of cases there has never been the slightest suggestion of alkalosis ; the tendency was rather to acidosis.

Adrenals :—Toxic products absorbed from the intestine or elsewhere first stimulate then exhaust the adrenals, a fact that goes a long way to support the toxic theory of asthma. This is corroborated by the value of adrenalin in allaying spasm. This was confirmed by examination of the adrenals at necropsy. Allergy :—Allergic manifestations other than asthma, mainly of the skin, were found in 55 per cent. Heredity :—Family history of asthma or its allies was found in only 26 per cent. The Nose :—In adults the nasal condition in 58 per cent suggested that local treatment was necessary but frequently they did not get it, because the toxic state prevalent in asthmatics affects the mucosa of nose and bronchi as well as skin. Sinusitis occurred in 10·5 per cent. In treating this, as in the case of all nasal operations, " ectomising " surgery should be avoided ; the minimum interference should be the aim. Polypi were found in 14 per cent. Zinc ionisation was valuable in helping to prevent recurrence after removal of polypi. Asthmatics are often worse after nasal surgery. Unless they have been detoxicated they usually have an attack within forty-eight hours of operation. Prognosis :—If they are not mouth-breathers, have no defect of chest or limb that might preclude active life in the open, and if they follow treatment, mainly hygienic and dietetic, at least 90 per cent of asthmatic children under 15 can be cured and stay cured. The majority of adults can be cured or, provided there is no hypertrophy of bronchiolar muscle, so improved as to make all the difference between health and disease.

R. R. Simpson.

Miscellaneous

The Grass-Pollen Antigen for Hay-Fever Desensitisation. JOHN FREEMAN. (*Lancet*, 1933, i., 573.)

The writer concludes that, taking it all round, in England, the true hay-fever due to grass-pollen is a hundred times more important than all the other pollen fevers rolled into one. Extracts from all the various grass-pollens furnish one and the same antigen for the purposes of desensitisation to hay-fever.

MACLEOD YEARSLEY.

The Grass-Pollen Antigen for Hay-Fever Desensitisation. Part II. JOHN FREEMAN. (*Lancet*, 1933, i., 630.)

The author follows up his former paper with this second part, dealing with dosage, into which he enters with considerable detail. He divides his conclusions, which are decidedly illuminating, into three headings, viz. 1. The practitioner may justifiably tell his hay-fever patient that he *can* be cured for certain; but should add in the next breath that unless symptoms are really exceptionally severe such complete treatment may be hardly worth while. Far less treatment than this usually gives satisfactory or even complete relief, but it is impossible at present to guarantee how much less will do sufficiently well. 2. Some, but at present not enough, evidence as to the successful progress of the desensitisation can be gained from the diminishing skin reactions. 3. There is apparently no danger that the patient may have to pay for present desensitisation by subsequent increased sensitisation.

MACLEOD YEARSLEY.

Changes in the Skull due to Tertiary Syphilis. C. VON EICKEN. (*Z. Laryng.*, 1932, xxiii., pp. 395-8.)

In this short article Prof. von Eicken describes a case which illustrates tertiary syphilitic changes of the skull bones in a very striking manner. The X-ray photographs which are reproduced in the text clearly show irregular areas of rarefaction. The porous changes affect chiefly the flat bones of the skull, and the petrous bone generally escapes. This point is illustrated by the photograph of a temporal bone taken from Passow's collection.

J. A. KEEN.