tree was not desensitized not only would the patient cough but he would also move, and it would be difficult to continue the examination. Again, during bronchoscopy it was easy to administer further chloroform if required. He had not tried Dr. Johnson's use of evipan, and frankly he was a little frightened of this drug. In children he had been using paraldehyde instead of avertin, not, of course, giving them omnopon or scopolamine. This had worked very satisfactorily. Avertin for children might be equally good or equally safe, but he was loth to give up a method which so far he had found both safe and satisfactory.

Otherwise he thought that all the points he might have made in the discussion had been dealt with by the previous speakers. In conclusion he wanted to say that he was not suggesting that any method or sequence of anæsthesia should be rigidly adhered to. Every case presented its own problems which influenced the anæsthetic procedure, and safety lay in assessing the respective dangers of the various agents.

Dr. Cogswell said that a question had been asked him about his administration of paraldehyde. His dose for children was 1 dram per stone of body weight. He endorsed what Dr. Johnson had said with regard to chloroform and avertin. Having used this method now for seven or eight years in some 2,000 cases, he approached it with no particular anxiety.

ABSTRACTS

EAR

My Modification for Preparing Histo-Architectonic Slides through the whole Middle Ear. M. A. ZUCKERMAN (Charkow). (*Jurnal ushnikh, nossowikh i gorlowikh bolesnej*) (*The Journal of Otology, Rhinology and Laryngology*, Russian, 1938, xv, 1.)

The author recommends a modification of Schmidt's method of histological section of the middle ear. He advises section in a vertical rather than in a horizontal plane. The direction of the main incision is indicated by a thin probe carefully introduced into the tympanum through the Eustachian tube, the knife being put vertically, parallel to the probe, between the fissura petrosquamosa and the eminentia arcuata. The section traverses the mastoid, the bottom of the tympanic cavity, the bulbus venae jugularis, and the Eustachian tube at its whole length, thus providing the best visibility of all parts of the middle ear. The technique is extremely easy. Both halves of the preparation are to be cut in the usual manner.

A. I. CEMACH.

Ear

A Study in Presbycusis. NOBLE H. KELLY. (*Archives of Otolaryngology*, March 1939, xxix, 3.)

The writer deals with the auditory loss which accompanies increasing age, and the effect of this loss on the perception of music and speech. Up to the age of 70 hearing remains normal for frequencies up to 512 cycles. Between 70 and 80 years the auditory loss at 1,024 cycles is 14 decibels. Even at the age of 50 presbycusis is already apparent for frequencies above 2,048 cycles. Thus, presbycusis for the high frequencies becomes progressive with increasing age, and most persons above 60 have lost their serviceable hearing for frequencies above 4,096 cycles.

The elimination of frequencies above 4,000 cycles does not affect the quality of a violin tone when heard by a person over 60 who manifests presbycusis, but such elimination alters the character of the same tone heard in the normal ear.

The average person over 60 is not obviously handicapped in the recognition of vowels except at low intensity. In the recognition of consonants a person past 60 is inferior at all intensities to a person with normal hearing. In ordinary conversation (38 decibels above threshold) the presbycusic person recognizes 75 per cent. of the consonants. DOUGLAS GUTHRIE.

A Case of Ossification of the Auricle. R. HAUG (Munich). (*Monatsschrift für Ohrenheilkunde*, 1939, lxxiii, 287.)

After commenting upon the rarity of the condition and quoting some cases from the literature, the author describes the case of a man of 60 years old whose left auricle was ossified. The ossification appeared to be confined to the normally cartilaginous parts of the pinna. The helix and anti-helix were involved and extension had taken place to the anti-tragus and scaphoid fossa.

In the past the ear had been affected by frost-bite, which was probably the cause of the bone formation. The author considers three possibilities: 1. A destruction of cartilage cells followed by a deposit of calcium salts. 2. A direct metaplasia of the cartilage elements into bone. 3. A combination of partial calcification with islands of bone formation.

The patient refused operation, so that a biopsy could not be performed. DEREK BROWN KELLY.

On Sequestrum Formation in the so-called Transitional Form of Middle-Ear Inflammation. HELMUTH RICHTER (Erlangen). (*Z. Hals- u.s.w. Heilk.*, 1938, xliii, 301-5.)

An abscess formed after thirty-five days in a case which in its course resembled a catarrhal otitis media. On opening the mastoid process a bony sequestrum the size of a walnut was found. No new bone formation was to be seen, in spite of five weeks' illness. The

true necrosis in a case of apparent catarrhal disease has suggested the term "transitional middle-ear inflammation", as a variety midway between the two extremes of catarrhal inflammation, and the more rare acute necrosing type. Constitutional debility or disease (e.g. diabetes) are predisposing causes. F. C. W. CAPPS.

Thrombosis of the Lateral Sinus. JOSEPH G. DRUSS (New York). (*Archives of Otolaryngology*, January 1939, xxix, 1.)

This paper deals with a series of sixty-two cases, observed during an eight year period, and in particular with fifteen fatal cases in which the temporal bones were examined in serial sections. The mortality was 29 per cent. In ten of the fifteen fatal cases the onset was preceded by acute otitis media, and in five by chronic otitis. Intracranial complications other than sinus thrombosis were present in nine of the cases on admission to hospital. The jugular bulb was involved in each of the fifteen cases studied. Thrombosis of the petrosal sinuses is a frequent histological finding and it would appear that those vessels may act as pathways of infection for meningitis. The writer believes that the classic operation which includes ligation of the jugular vein, incision and removal of infection in the sinus, and obliteration of the latter, should be the procedure of choice.

DOUGLAS GUTHRIE.

Acute Mastoiditis from the surgical point of view. A. KULKIN. (*Archives of Otolaryngology*, February 1939, xxix, 2.)

This is a statistical study of 318 cases of acute mastoiditis, including forty-three cases of recurrent mastoiditis. 70 per cent. of the recurrent cases occurred within three years of the primary mastoidectomy. Mastoiditis appeared to be slightly more common on the right side, and in 10 per cent. of the series it was bilateral. As for age, 44 per cent. were under six years and 79 per cent. under ten years. In 59 per cent. aural discharge had been present for fifteen days or less. A chart of seasonal variation showed a great rise in the case incidence during the first six months of the year, and especially in April and May. By far the commonest organism found in the pus was the streptococcus (87 per cent.). The mortality was 1·2 per cent., including meningitis, two cases; petrositis, one case; and sinus thrombosis, one case.

DOUGLAS GUTHRIE.

The importance of Local Thermoasymmetry in the Diagnosis of Inflammatory Processes in the Mastoid Bone. E. N. NOVIK (Rostov s/D.). (*Jurnal ushnikh, nossovikh i gorlovikh bolesnej.*) (*Journal of Otology, Rhinology and Laryngology*, Russian, 1938, xv, 2.)

Using thermoelectric batteries and a mirror galvanometer the author measured the temperature of the skin in the mastoid region

of 200 normal persons and seventy patients suffering from various diseases of the middle ear.

He stated that, whilst under normal conditions as well as in cases of acute otitis the difference between the superficial temperature on both mastoids did not exceed 0·3° C.; there was a considerable hyperthermy, rising up to 2° C. on the affected side, in all cases of acute inflammatory processes of the mastoid.

He regards thermometry, therefore, as a most valuable clinical method in latent mastoiditis, especially in the case of little children. when there is a doubt about the indication for surgical interference.

A. I. CEMACH.

NOSE AND ACCESSORY SINUSES

On the X-ray Appearances of Membranous Choanal Atresia and an Operation Method. L. PESTI (Budapest). (*Monatsschrift für Ohrenheilkunde*, 1939, lxxiii, 245.)

The author describes the case of a 52-year-old woman with bilateral occlusion of the posterior nares. By means of X-ray pictures taken in the hanging-head position, and with a contrast medium in the nose, the thickness and position of the occluding membrane are demonstrated.

After a description of the symptoms, the various operative methods are discussed and the difficulty of maintaining patent the circular wound left by removal of the occlusion is emphasized.

In the reported case the author cut through the septum vertically at about 1·5 cm. from the entrance to the nose. Submucous resection was then carried out and the posterior part of the bony septum removed. An excellent view of the occluding membrane was thus obtained. After removal of this with a conchotome, the two mucous membrane flaps, left after the septal resection, were partially detached and twisted back to cover the raw area. The flap from the right side of the septum was used for the left choana and *vice versa*. The method of doing this is shown in diagrams.

DEREK BROWN KELLY.

On the Choice of Method in Operation for Frontal Osteomyelitis. HAKAN GADOLIN (Finland). (*Z. Hals- u.s.w. Heilk.*, 1938, xliii, 283-93.)

The author gives a critical review of the methods of incision. In severe and fulminating disease cosmetic result must, of course, be a secondary consideration. Any incision giving proper exposure is justifiable. In chronic osteomyelitis the median incision is recommended where possible. In one case the author made curved incisions under the eyebrows and joined them over the nasal bridge. He got good exposure and a good cosmetic result. Drainage was transnasal after the method of Bárány. Incisions in the eyebrows

are noticeable, and action of the frontal muscles is hindered. The relation of the various incisions to regeneration of the bone is discussed and movement and susceptibility to change of temperature in the forehead. Wide freeing of the periosteum is thought to be dangerous and the risk of spreading infection in the soft tissues is certainly present in the method of turning down the scalp, as described by Mygind.

A very full list of references is given.

F. C. W. CAPPS.

TONSIL AND PHARYNX

Muscle Tissue in the Palatine Tonsil and its Pathophysiological Significance. M. KLISTER (Odessa). (*Jurnal ushnikh, nossowikh i gorlovikh bolesnej*) (*Journal of Otology, Rhinology and Laryngology*, Russian, 1938, xv, 1.)

Report of histological examination of the palatine tonsils in 350 cases, in 6·7 per cent. of which enclosures of muscle tissue had been found.

These findings prevail in children, being very rare in adults. As the scanty muscle fibres appear either close to the lymphatic tissue or more seldom within it, and are in a stage of degeneration, their normal muscular function cannot be assumed. The author does not believe, therefore, that these muscle elements can be of any physiological importance with regard to the evacuation of the lacunae. They seem to be embryonic remains only.

A. I. CEMACH.

LARYNX

Malignant Degeneration of Laryngeal Polypi. PIQUET and BOURY. (*Annales D'oto-laryngologie*, March 1939.)

The insignificant part played by benign tumours of the larynx in the pathogenesis of laryngeal cancer appeared to have been settled when Semon published his observations that out of 10,797 cases only five eventually developed undoubted malignancy. The authors do not hold this view and publish case histories to support their contention—not that benign tumours are transformed into malignant tumours—but that they are often a precursory clinical expression of malignancy. In certain conditions and for certain hitherto unexplained reasons, the laryngeal mucosa undergoes certain alterations (hyperkeratosis, dyskeratosis) which constitutes a so-called pre-cancerous soil. The presence of a polyp may sometimes draw attention to this modification and give a timely warning of local malignancy. The frequency of epithelial degeneration varies according to the different histological types. It is rare in the simple polyp and is much more frequent in papillomata. The latter when they are found in aged people are often an expression

of advanced malignancy. One must, therefore, give a very guarded prognosis in these cases. And when recurrence takes place soon after the excision of a histologically benign growth, one should pause to consider if the vocal cord should not be removed.

M. VLASTO.

On Actinomycosis of the Larynx. WALTER SCHÜTZ (Berlin). (*Z. Hals- u.s.w. Heilk.*, 1938, xliii, 296-300.)

A case of primary actinomycosis of the larynx is recorded and an illustration and X-ray pictures given. Changes in the substance of the cartilages are especially noticeable. The patient, aged 50 years, was treated by X-ray. Tracheotomy was unavoidable. Reference is made to recorded cases of para-laryngeal actinomycosis.

F. C. W. CAPPS.

Technique of Laryngofissure for Cancer of the Larynx. M. C. MYERSON. (*Archives of Otolaryngology*, April 1939, xxix, 4.)

Laryngofissure with excision, as the operation might more correctly be named, was first suggested by Desault in the eighteenth century, and since these early days it has passed through many phases. In England it has had its greatest vogue and among those who did much to develop it were Gibbs, Durham, Butlin, Semon and Thomson. It is a relatively simple procedure and no fatalities nor severe local reactions should follow the operation. It is applicable only to growths limited to one side, with unimpaired movement and no involvement of the arytenoid, the ventricular band or the sub-cricoid region.

The interior of the larynx should be cocainized before operation, and only a small incision is necessary. Tracheotomy is not essential and the removal of part of the thyroid ala is unwarranted. The cartilage is best divided by a small circular saw, electrically driven. The soft tissues are incised with a sharp knife and after the cancer-bearing area has been peeled from the cartilage with a blunt elevator it is excised in one piece by a special rectangular punch. The patient is allowed to get up next day but should refrain from attempting to speak for one week.

DOUGLAS GUTHRIE.

ŒSOPHAGUS

A Record of the breaking up of Dentures in the Upper Œsophagus with the aid of Seifferts Burr. KARL WÜST (Berlin). (*Z. Hals- u.s.w. Heilk.*, 1938, xliii, 281-82.)

Two successful cases are recorded. In one further case there was failure owing to buckling of the casing of the driving cable to the drill. Difficulty was also occasioned by the collecting of metal dust, which obscured the view. This was overcome by flushing with saline, and suction. A description of the instrument is given.

F. C. W. CAPPS.

Abstracts

MISCELLANEOUS

Lingual Thyroid. CARROLL SMITH. (*Archives of Otolaryngology*, January 1939, xxix, 1.)

The thyroid gland is formed, during fœtal life, in the upper end of the thyroglossal duct at the base of the tongue. Normally, it descends to its position in front of the trachea, where the duct ends, but in rare cases it remains in its original position, forming a lingual thyroid. Still more rarely it assumes other positions and gives rise to a sublingual, a pre-laryngeal or a retrosternal thyroid. In such cases it is an accessory to the normal gland. Montgomery in 1935 reported an extensive study of the lingual thyroid based upon 144 cases. Dysphagia (in seventy-two patients) was the leading symptom, dysphonia was second in frequency and dyspnœa came third.

Hypothyroidism was noted in twenty-one cases and hyperthyroidism in four cases. Malignant growths and degenerative conditions affect the lingual thyroid in the same proportion as the normal gland.

The most frequent route of surgical approach is through the mouth and an exploratory incision in the neck, to ascertain the existence of the normal thyroid, may be warranted, as absence of the thyroid in the neck has been reported in 70 per cent. of the cases. If there is no thyroid in the neck, the entire lingual thyroid must not be removed.

The writer reports one case of lingual thyroid, in a girl of 13, who complained of choking sensations and difficulty of breathing. A tumour the size of a walnut was found on the dorsum of the tongue and was successfully removed by the oral route.

DOUGLAS GUTHRIE.

A rare feature of the Ramsay Hunt Syndrome with some observations on the Sensory System of the VIIth Nerve. C. P. G. WAKELEY and J. H. MULVANY. (*Lancet*, 1939, i, 746.)

The authors have made a valuable contribution to this interesting subject. Having given a résumé of the syndrome and described two cases in which a vesicular rash was present on the hard and soft palates and in the nose, in addition to the usual auricular eruption and facial paralysis, attention is called to the wide field which may be occupied by a vesicular eruption. This depends on the frequent association of the VIIth nerve sensory fibres with the sensory branches of neighbouring nerves. Certain cases of herpes occipitocollaris which are limited to the second and third cervical root zones may depend on the intimate anastomosis (?) which is known to exist between the VIIth nerve and the IInd and IIIrd cervical nerves, rather than on a ganglionitis of those roots.

The importance of the great superficial petrosal nerve as a sensory vehicle is emphasized. In this respect it probably has four

distinct properties: (*a*) By means of its tympanic branch, it is responsible for all pain referred to the tympanic plexus from areas situated within the sphenopalatine nerve distribution with the exception of the soft palate, which it serves jointly with the glossopharyngeal nerve. (*b*) It may provide, *viâ* the otic ganglion, a major pathway for the passage of gustatory fibres to the anterior two-thirds of the tongue, and it is suggested that this route is chosen in at least half the cases. Some of the autonomic secretory fibres to the chorda territory may also be conveyed in this manner, relaying in the otic ganglion. (*c*) It may be responsible for the passage of sensory fibres to the auriculotemporal nerve. (*d*) Its distribution comprises all the sphenopalatine territory, in which the whole area of the hard palate should be included.

Comment is made upon the rarity of vesicles on the anterior two-thirds of the tongue. A bibliography is given, which is fairly complete. MACLEOD YEARSLEY.

The use of Potassium Salts in Hay Fever. BENSON BLOOM, M.D. (Tuscon, Arizona). (*Jour. A.M.A.*, December 17th, 1938, cxi, 25.)

This preliminary report deals mainly with the use of potassium salts in patients suffering from hay fever. This study was stimulated by the thought that allergy is largely due to a disturbance of electrolyte metabolism. Nathan and Stern are quoted as saying that in acute dermatoses, serum potassium fell to a subnormal level and returned to normal as the cutaneous lesions improved. The pharmacological action of potassium chloride is in many respects similar to that of epinephrine and ephedrine.

Altogether twenty-nine cases of hay fever, six with pollen asthma, were studied during the hay fever season. As indicated in a table every one of these patients experienced a degree of relief and most of them (twenty) approximated to complete relief by the third day. The treatment consisted of five grains of potassium chloride in a glass of water three times a day. The first improvement noticed was the disappearance of irritation of the eyes. Within twenty-four hours the copious discharge had almost entirely cleared, and as sleep was less interfered with, the general state of health was greatly improved.

This salt was helpful in three cases of urticaria, and two cases of polyposis, but has not been effectual in a few cases they have tried of chronic asthma or migraine. It is suggested that other potassium salts may have similar results. ANGUS A. CAMPBELL.