Ear

Acute Œsophagitis in Infant.—E. WATSON-WILLIAMS.

A baby three weeks old (born four weeks prematurely) had been quite normal until it suddenly began to have difficulty in swallowing. Although it sucked vigorously, it regurgitated each mouthful at once. There was somewhat rapid, but not severe, wasting, and forty hours after the onset of symptoms œsophagoscopy was carried out. The whole œsophagus was bright red, without ulceration, and bled very slightly on introduction of the tube. The child died next day, apparently from water starvation.

Autopsy.—The only lesion was an acute inflammation of the whole length of the œsophagus; no signs of syphilis in child or in mother.

ABSTRACTS

EAR.

Correlations of Histological Observations and the Acuity of Hearing. STACY R. GUILD (Baltimore). (*Acta Oto-Laryngologica*, Vol. xvii., fasc. 2-3.)

An attempt was made to apply the numerical results by examining the ganglion cells of the spiral ganglion (following the method described last year at the reunion at Frankfurt by Guild, Crowe, Bunch and Polvogt) in each of the 48 ears whose acuity of hearing for sounds had been audiometrically examined during life.

From the correlations which exist between these results and the observations which it was possible to make by the usual methods in other essential parts of the cochlea and middle-ear cavities, it was shown that our knowledge of the rôle which each of the parts of the organ of hearing plays has not yet arrived at the stage at which it is possible to diagnose with certainty, even with the aid of the excellent audiometer curves, what are the pathological changes taking place in various individuals. The numerous combinations of different lesions which present themselves, and which could be present, hinder the satisfactory evaluation of the effect of each distinct lesion.

The work of Wever and Bray has inaugurated a new method for finding out by experiment the effect produced by distinct ear lesions on the acuity of hearing.

The preliminary results which have been obtained in the author's laboratory, after examining the lesions of the middle ear in animals by this method, indicate that we can thus obtain information which will be very important in finding out the correlation between some of the functional and structural changes observed in man.

Translation of author's abstract.

Abstracts

Some Investigations on the Caloric Test. A. THORNVALS (Copenhagen). (*Acta Oto-Laryngologica*, Vol. xvii., fasc. 2-3.)

We have tried to find a more practical method of studying the quantitive caloric test, especially in those cases in which a spontaneous nystagmus exists. For this purpose we have made use of a new modification of Plums' apparatus. After the temperature of the patient has been taken we make the test with water of a temperature either 7° higher or lower than that of the patient and we put down the result thus:

$$P.d.\ \frac{18''\ (70\ cm^3 - 2')}{20''\ (70\ cm^3 - 2')}\ \begin{matrix}\div\\ 7^\circ\\ +\end{matrix}$$

This formula is to be read in the following way:—In the dorsal position (*p.d.*), above the line is written the result of the right ear test, beneath the line that of the left. We observe on the right side that the caloric nystagmus has begun after 18″, that 10 cm³ of water have been used and after 2 minutes' duration the reaction has subsided. The reaction has been induced by water 7° lower than the temperature of the patient (7÷). In the same way the result of the other ear may be read. Here however 7+ means that the reaction has been induced by water 7° higher than the temperature of the patient. The test is generally made in the dorsal (*p.d.*) and in the central (*p.v.*) position.

Author's abstract.

Disturbances of the Movements of the Alimentary Canal after Unilateral Labyrinth-Extirpation in Cats. J. LE HEUX and A. DE KLEYN (Utrecht). (*Acta Oto-Laryngologica*, Vol. xvii., fasc. 2-3.)

From clinical observations we know that changes in the function of the labyrinth are often accompanied by disturbances of the movements of the alimentary canal.

It is a remarkable fact, however, that but few experiments have been carried out to investigate this phenomenon. The well-known method of Cannon of examination by X-rays was used in the experiments. After observing a series of normal animals a second series of animals was observed after unilateral labyrinth extirpation.

After this operation a marked delay in the passage of food through the stomach and small intestine was noted in the animals, not to the same extent, however, in the large bowel. Vomiting, which is often noticed in man, was observed only once in the animals. The influence of the operation upon the alimentary canal is, however, transient and is not noticed after 10 to 12 days. The extirpation of both labyrinths does not give a different result. It is concluded that the loss of function of the labyrinth causes these disturbances of motility.

H. V. FORSTER.

Ear

The Operation of Epitympanal Antrotomy. Professor O. Voss (Frankfort). (*Revue de Laryngologie*, February 1932.)

Professor Voss quite logically objects to the designation "conservative radical mastoid operation" which has been extensively applied to this and similar procedures. It is, of course, a contradiction in terms. The original feature of Voss's operation, and of the similar one of Beyer, is that the tympanum is approached from above instead of from behind. This allows of a more perfect exposure of the epitympanal recess, with less risk of disturbance to the heads of the malleus and incus, which it is desired to preserve.

In dealing with the spread of middle-ear suppuration, we are apt to think too exclusively of the mastoid as the pathway of infection. No doubt this is the more frequent route, but it is important to bear in mind that there is an anterior, as well as a posterior, chain of cavities in connection with the tympanum. The seriousness of the complications which may arise from the spread of infection along the anterior chain of cavities is no less than those which may follow mastoid infection, and they constitute the special danger in temporal bones of the pneumatic type. Spread of infection by the anterior route starts in the cells in the roof of the tympanum, above the Eustachian tube, and spreads to the chain of cavities surrounding the dense bony capsule of the labyrinth and the carotid canal, whence it reaches the apex of the petrous pyramid. Often the cells in the root of the zygoma are involved. Perforations are often in the anterior part of the membrana tympani or in the attic region, and otorrhœa tends to become chronic by reason of persistent discharge from the epitympanic cavity.

Deep extension of the inflammation gives rise to symptoms of labyrinthine irritation, and to the well-known clinical picture described by Gradenigo—widespread pain on the same side of the head, trigeminal neuralgia (often severe and persistent) and sixth-nerve paralysis. A simple mastoid operation affords very little relief, or may even make the patient worse. The suppuration persists. Even a radical mastoid operation usually fails to effect a cure, especially if the inflammation in the zygomatic cells is overlooked. Moreover, the radical operation unnecessarily destroys the tympanic structures, which may usually be preserved with advantage.

Voss's case records also show that infection of the anterior chain of cells can give rise to meningeal irritation, meningeal infection and to pyæmic metastatic abscesses without involvement of the venous sinuses. The pathogeny of the latter complication is probably septic thrombosis of small veins in the roof of the tympanum. Cases of his, presenting these formidable complications, have healed after the performance of the operation he describes.

With regard to the operation itself, the following are the chief

points. The mastoid antrum is opened in the ordinary manner, and any infected cells in the mastoid are dealt with. The post-auricular incision is carried forward over the pinna to the root of the zygoma. The zygomatic ridge above the meatus and the root of the zygoma in front are removed, and the bone wound is gradually and carefully deepened from above downwards, so as to expose completely the attic and the heads of the malleus and incus. The greatest care is necessary not to disturb these structures, and the author advises that the removal of bone should be effected by means of fine nibbling forceps in preference to chisels or gouges. A refinement of technique is the leaving intact of a small margin of bone to give attachment to the tympanic membrane. Any cholesteatomatous masses or granulations are carefully removed with fine curettes. Voss has given up the attempt to enlarge the meatus by a plastic operation, and relies for drainage of the attic region on tamponading the supra-auricular wound, which is left open. This necessitates a secondary suture when the cavity has become healthy, so as to prevent dropping of the pinna.

He gives the following indications for the operation :—

1. Chronic attic suppuration.
2. Uncomplicated subacute suppuration of the middle ear involving the attic, or of the attic alone.
3. Acute infection of the cells in the petrous pyramid.
4. Blood infections (pyæmia) secondary to attic suppuration.
5. Fracture of the temporal bone involving the epitympanic cavity.
6. Cases with labyrinthine or meningeal symptoms arising in the course of acute otitis media.

The technique is the same for acute and chronic cases.

No plastic operation on the meatus is done in either acute or chronic cases.

The procedure should be regarded as an extension of the simple, or Schwartze, operation, and its adoption should materially diminish the number of radical operations required.

The operation of epitympanal antrotomy is a useful method of approaching the labyrinth when it is necessary to drain its cavities.

G. WILKINSON.

An Operation for the Exposure of the Jugular Bulb. FERNANDO CASADESUS (Barcelona). (*Proceedings of the Collegium Oto-Rhino-Laryngologicum*, Session 1931.)

The writer has performed this operation ten times on the dead subject, and twice on the living. The anatomical difficulties are formidable. The three important structures to be avoided are the facial nerve, the spinal accessory nerve, and the vertebral artery.

The mastoid incision is carried down into the neck, and the jugular vein is ligatured. A horizontal incision, two inches long, is made backwards from the middle of the mastoid wound, and is carried down to the bone. The sterno-mastoid, splenius and complexus are separated from the bone. These muscles are retracted backwards as a flap, which carries with it the spinal accessory nerve. The apex of the mastoid is next removed, and the posterior belly of the digastric is carefully separated from its groove, except at the anterior extremity, where it is left attached, as this part of the muscle lies directly over the seventh nerve and protects it. The muscle is retracted forwards, and in the space between the two muscle flaps the jugular vein is fully exposed right up to the base of the skull. The bone on the inferior surface of the petro-mastoid intervening between the site of emergence of the jugular vein from the foramen lacerum posterium and the lateral sinus lying exposed at the bottom of the mastoid wound is now removed. If this were done along the shortest line the facial nerve would be endangered. It is therefore necessary to work at first directly inwards, and then inwards and forwards, thus turning the nerve. To obtain sufficient exposure for this removal of bone, the rectus lateralis, which is attached to the base of the skull at this point, must be separated and allowed to hang down from its attachment to the transverse process of the atlas, in which position it covers and protects the vertebral artery. The whole of the bone lying below the jugular bulb and the bend of the lateral sinus beyond it can now be carefully picked away with nibbling forceps. G. WILKINSON.

NOSE AND ACCESSORY SINUSES.

Further Investigations on the Histamine-like Substance found in Rye Pollen. C. E. BENJAMINS and J. STRUIKEN (Groningen). (*Acta Oto-Laryngologica*, Vol. xvii., fasc. 2-3.)

In a paper read at the meeting at Frankfurt attention was called to a certain substance in rye-pollen not to be found in the pollen of eight other gramineae. It was concluded that this substance was histamine itself or a histamine-like substance. The facts on which this opinion was based were:—

1. Smooth muscles of guinea-pig and cat contract when brought into contact with rye-pollen extract just as they do with histamine.
2. This reaction may be repeated several times in succession.
3. The latent period is the same for both.
4. The character of both is potential.
5. The resistance against high temperature and the action of peptic juices.
6. The cutaneous reaction in normal persons.

Further experiments were made in order to complete these results. A similar action of histamine and rye-pollen extract was found upon—

7. The blood pressure of cat and rabbit.
8. The chromatophores of the frog's skin; and
9. On the pupil of the cat's and rabbit's eye.

Finally, the strength of this substance in rye-pollen was standardised and found to be equal to 1 : 75,000 to 1 : 50,000 histamine-chloride.

Author's abstract.

Bacteriological Investigations on Ozæna. Docteur Rebattu (Lyon). (*Acta Oto-Laryngologica*, Vol. xvii., fasc. 2-3.)

With a view to the preparation of autovaccines, we have studied the flora of 100 ozæna cases from a bacteriological point of view. In not a single case have we been able to disclose with certainty the cocco-bacillus as described by Perez. Two microbic forms were extremely frequent and predominant, first the Abel-Lowenberg (which is no other than the pneumo-bacillus of Friedlander) and, secondly, the pseudo-diphtheria. In 58 cases (*i.e.* 58 per cent.) no other microbe accompanied these two. In 31 other cases the cultures showed staphylococcus, pneumococcus, streptococcus, etc., as well. Only in 11 instances were the pneumo-bacillus of Friedlander and the pseudo-diphtheria both absent: staphylococcus was found 10 times and *B. pyocyaneus* in a single case and almost always in unilateral ozæna.

From our investigations we have thus derived rather identical results (although the opponents of the microbic theory in ozæna insist upon the variety of accused microbic elements), which may be considered as an argument in favour of, at least, the relative bacteriological specificity of ozæna. *Author's abstract.*

An Alimentary Theory of the Origin of Hay Fever and a Diet founded on it. C. E. Benjamins (Groningen). (*Zeitschrift für Hals-, Nasen- und Ohrenheilkunde*, Band xxx., Heft 4, p. 473.)

Professor Benjamins propounds a theory as to the development of grass-pollen hay fever through the mechanism of the alimentary tract. The cereals and the articles of diet prepared from them are held to be most responsible for its occurrence. His observations are founded on the results of experiments on guinea-pigs. The production of positive skin-reactions and the beneficial result of eliminating the offending food-stuffs afford evidence of the sensitisation of hay fever patients. He tested this food elimination on several patients in whom, with very few exceptions, the good effects were evident. For practical application he specifies the articles of diet to be avoided and those to be consumed.

Among the forbidden articles of diet he includes bread of all sorts, biscuits, oats, semolina, all sorts of cakes and fine bakery, tarts, pie-crust, puddings made of wheat-meal, strips of Italian paste (Nudeln), macaroni, maizena or rice. It has to be kept in mind that flours of various sorts are incorporated in the preparation of minced meat, croquettes, liver-sausage, blood-sausage and other kinds of sausage.

In place of these products foods free from gramineae may be substituted as, for example, potato-flour for thickening soup and for making pie-crust. Jewish bakers know how to make good fine pastry from potato-flour. Raw potatoes passed through a meat-mincing machine can, with the addition of beaten-up whites and yolks of eggs and some potato-flour, be made into excellent pancakes. Buck-wheat and buck-wheat groats may take the place of oatmeal; so also tapioca, arrowroot, banana, lentil and chestnut-flour may help to vary the menu. Milk and the sour milk-product "Yoghourt," fruits and vegetables, such as peas, beans and lentils, with many kinds of flesh food, allow of considerable choice. Fine rice-meal, having been found to produce only slight reaction, may be included. The greatest difficulty is to find materials for the tea and coffee table.

He appeals for a fair and hopeful trial of this "non-graminacious" diet in a wider circle of sufferers from hay fever.

JAMES DUNDAS-GRANT.

LARYNX.

The Importance of Systematic Periodical Examination of the Larynx in cases of Pulmonary Tubercle. H. RETROUVEY. (*Revue de Laryngologie*, December 1931.)

The writer urges that all cases of pulmonary tubercle should, as a matter of routine, undergo periodical examination by a laryngologist. It is not wise to leave this examination until symptoms, such as husky voice, or pain in swallowing, call attention to the larynx. The amount of functional disturbance depends, not on the extent of infiltration or ulceration, but on its situation. Vocal troubles arise from interference with the action of the vocal cords. Huskiness or weakness of voice may appear very early in the course of the disease, and be quite marked without any decided alteration in the appearance of the larynx. This would indicate a deep-seated infiltration of the tensor muscles, without implication of the cords themselves. On the other hand, quite extensive infiltrations of the epiglottis, or aryepiglottic folds, leave the voice unaffected, so long as the vocal cords and ventricular bands are free. If the lesion has not attacked the posterior aspect of the larynx in the neighbourhood of the mouth of the œsophagus, or the lateral aspect

and free borders of the epiglottis, pain in swallowing may be absent. In such a case the presence and extent of the disease within the larynx may come as a surprise to the examiner at his first inspection. In contrast to these cases we see others in which the dysphagia is of frightful severity. This is usually in the terminal stage of the disease. If the lesions causing the dysphagia have passed beyond the area of distribution of the superior laryngeal nerve, practically nothing can be done to allay the pain, and the patient quickly dies from inanition. Sometimes slight, or even severe, dysphagia occurs without ulceration, and is then probably due to compression of the terminal filaments of the sensory nerves by infiltration. Dyspnœa is a rare symptom in laryngeal tuberculosis and, when present, is generally due to acute exacerbations, or secondary infections causing œdematous swelling. This may also occur after too active local treatment. It is much less frequently due to massive infiltration, or nodular tuberculomata. The respiratory mechanism adapts itself without distress to a considerable degree of stenosis, if its onset is gradual.

The author is sceptical as to the existence of primary tuberculosis of the larynx, but admits that infiltrations are sometimes found when no tubercle in the lungs can be discovered by the stethoscope or by X-rays. He thinks that the primary focus of infection in such cases is usually in the glands of the hila of the lungs, and that the infection reaches the larynx by way of the lymphatics, which is, indeed, the probable pathway, even when the primary focus is in the lungs.

In many cases the first signs which enable a diagnosis of tubercle of the respiratory tract to be definitely inferred are to be found in the larynx. Amongst such early symptoms may be cited a slight œdematous swelling in the region of the arytenoids and symmetrical reddening of the apices of the arytenoids, as pointed out by Moure.

G. WILKINSON.

Laryngectomy. Professor CASADESUS (Barcelona). (*Revue de Laryngologie*, July 1932.)

Spanish surgeons have always inclined to the operation of total excision of the larynx for carcinoma, rather than to laryngo-fissure. Tapia introduced Gluck's operation to Spain in 1911, and the technique of the operation has undergone constant improvement in that country since then, and may now be regarded as a "benign operation" in the hands of an expert.

A predilection for laryngo-fissure is characteristic of the English school of laryngology, where the technique of the operation has been chiefly developed. The writer admits that it constitutes the ideal procedure in early and suitable cases. The indications for its performance may be summed up as "epithelioma strictly limited to one

vocal cord." Possibly the modification in the operation recently introduced by Sir St Clair Thomson and others, consisting of resection of more or less of the thyroid ala, allows of a little more latitude in the selection of cases.

The writer insists on four points which he regards as essential in the performance of laryngectomy. The first, and most important, is the total removal of the prelaryngeal muscles. Only when this is done can the skin be laid accurately in contact with the sutured pharynx, the exposed trachea, and the "carotid gutters" on either side, which together make up the floor of the operation field. The operation is one in which it is highly important to avoid "dead spaces," as there is a special liability to late infections from leakage of the pharyngeal wound. Secondly, the mucous membrane lining the trachea should be accurately sutured to the edges of the skin incision. Great care should be exercised not to damage in any way the cartilage of the first ring of the trachea. Thirdly, the larynx should be separated from above downwards. By so doing it is easy to prevent the entry of blood and saliva into the air passages. After opening the pharynx by transverse incision below the hyoid the whole entrance of the larynx is in view, and the incision in the mucous membrane can be made accurately all round, without sacrifice of healthy tissue, but keeping well clear of the disease. Fourthly, the wound should be drained laterally at four points, corresponding to the angles of the dissected area.

The employment of local anæsthesia by infiltration is advocated for all cases. Preliminary tracheotomy is to be avoided whenever possible, and is regarded as a serious complication to the operation when it has had to be performed on account of respiratory obstruction. It is preferable to do laryngotomy rather than tracheotomy should urgent dyspnœa supervene during the operation. G. WILKINSON.

PHARYNX AND TONSIL.

Bleeding and Paralysis of the Sympathetic Nerve associated with Peritonsillar Abscess. P. G. GERLINGS. (*Acta Oto-Laryngologica*, Vol. xvii., fasc. iv.)

Bleeding is always a serious complication of peritonsillar abscess and the mortality in unoperated cases reaches 80 per cent.

The author reports three cases, of which two were under his own care. In all of these cases myosis of the homolateral eye showed interference with the sympathetic, and in one of them ptosis was also present; in this case also the abscess burst not only into the pharynx but into the auditory meatus, from which there occurred bleeding and discharge of offensive pus. Recovery, however, took place in this case, while the other two died of hæmorrhage.

The bleeding in cases of this kind usually comes from the internal carotid artery near the bifurcation of the common carotid; only rarely from the external carotid, the superior laryngeal, or the ascending pharyngeal.

Of 70 cases collected from the literature, 30 were operated on (ligature of external or common carotid artery) and 20 of these recovered, while of the remaining 40 cases on whom no operation was performed, only 8 survived. Ligature should therefore always be undertaken, and this should be applied to the common carotid except in the rare cases in which a perforation of a branch of the external carotid can be found. THOMAS GUTHRIE.

Facial Nerve Paralysis resulting from Local Anæsthesia for Tonsillectomy. P. G. GERLINGS. (*Acta Oto-Laryngologica*, Vol. xvii., fasc. 4.)

The author is an assistant in the clinic of Professor Burger, where local anæsthesia for tonsillectomy is obtained by a single injection of a 1 per cent. solution of novocain with adrenalin into the parapharyngeal space. A needle bent 3 cm. from its end almost to a right angle is inserted above the tonsil in an outward and downward direction, the object being to block the glosso-pharyngeal nerve.

In a series of about 2000 bilateral tonsillectomies performed under local anæsthesia induced by this method, there has been observed on 12 occasions, shortly after the injection, a paralysis of the facial nerve, always unilateral, and almost always confined to the branch supplying the mouth. The paralysis disappeared completely after half an hour and was accompanied by no discomfort to the patients.

The paralysis appears to be due to some of the anæsthetic solution reaching the ramus marginalis mandibulae of the facial nerve in the parotid fascial compartment, which communicates with the parapharyngeal space, through an opening in the deep layer of the parotid fascia, described by Klestadt as the "open spot of the parotid fascia."

In addition to the glossopharyngeal and the facial, other nerves may be affected by the injection. The motor branch from the vagus to the muscles of the soft palate is invariably paralysed, and in one case paralysis of the sympathetic was also observed. The hypoglossal, however, always appears to escape. THOMAS GUTHRIE.

Suture of the Bed of the Tonsil. Professor L. PIETRANTONI. (*Archivio Italiano di Otologia*, February 1932.)

The author recalls that the fear of hæmorrhage is the greatest obstacle to the removal of a great many diseased tonsils. He quotes many recent authors who describe series of tonsillectomy with a high proportion of serious hæmorrhage. He mentions the many prophylactic

measures that may be taken, such as estimating the coagulation time of the blood, the administration of calcium and various sera and the many processes that can be employed, at the operation, for stopping the flow of blood.

Professor Pietrantoni himself favours suture at the time of operation and he carries this out to the exclusion of all other methods. He points out that almost the entire blood supply of the tonsil lies immediately deep to the capsule and passes close to the inferior pole.

At the end of the operation a suture is passed through both anterior and posterior pillars of the fauces taking up just enough of the tonsil bed to include the vessels. The suture must be placed at the lower end of the fossa immediately above the level of the tongue. If it is placed higher than this it will miss some of the vessels. The suture is left in position for twenty-four hours only and, being removed then, there is no risk of adhesion of the pillars and consequent loss of mobility of the palate and dysfunction. F. C. ORMEROD.

Incision or Tonsillectomy? A Study of the Treatment of Paratonsillar Abscesses. A. LINCK. (*Arch. Ohr. u.s.w.*, Heilk., June 1932, Band cxxxi., pp. 310-343.)

The author describes several cases of paratonsillar abscess in which the usual treatment of incision was adopted with apparent recovery, yet several weeks later the patients became ill again with irregular temperatures, and gradually developing signs of generalised sepsis. The cases often ended fatally, in spite of extensive operations on the neck with excision of thrombosed internal jugular veins, etc., carried out at a late stage. It is important to remember that a small deep-seated focus of sepsis may persist for weeks and flare up later, although the appearances in the pharynx are quite normal.

When the post-mortem reveals metastatic lung abscesses as a terminal lesion and nothing very obvious in the pharynx or neck, the earlier history of a paratonsillar abscess may be forgotten and a diagnosis of "cryptogenic sepsis" is often made.

The author's main thesis is that one should practise *enucleation of the affected tonsil or tonsils in the acute stage* ("primary tonsillectomy"). The radical operation in the acute stage, according to Dr. Linck, would always prevent the serious sequelae which have been described.

There is no need to fear an aggravation of the general condition or a spread of the inflammation as a consequence of the operation. In a consecutive series of 163 cases of "primary tonsillectomy" no complications arose.

Local anæsthesia must be used, and a special technique of injection of the novocain solution from a point near the angle of the jaw is described. Patients stand the operation well and the symptoms are

quickly relieved, as one cannot fail to discover and to drain the peritonsillar collection of pus. The after-pain which is such a marked feature of the ordinary tonsil enucleation in adults, is practically absent after "primary tonsillectomy." J. A. KEEN.

ŒSOPHAGOSCOPY, BRONCHOSCOPY, ETC.

The Treatment of Acute Œsophagitis following the swallowing of Caustic Fluids. Prof. S. BÉLINOFF (University of Sofia). (*Revue de Laryngologie*, February 1932.)

It appears that the swallowing of caustic fluids is the most common method of attempting suicide in Hungary and the Balkan States. The figures given in this article are striking and appalling. Metziano of Bucharest had 142 cases in six years, David of Galatz 70 in four years, Milovonik (Serbia) 62 cases in three years from caustic soda alone, and the author 151 cases of stricture of the œsophagus due to caustic fluids in 12 years. Cases of inflammatory stricture have been six times more numerous in his clinic than malignant strictures. In contrast to these figures, Guisez (Paris) found that malignant stricture was nine times more frequent than inflammatory. The figures for Hungary are not given, but the writer states that they probably exceed those of the Balkan States. Surgeons in these countries have the unhappy privilege of abundant clinical material on which to study this intractable malady. The agent most frequently employed is caustic soda. The immediate mortality in the author's cases has been 30 per cent., and the delayed mortality is given as 13 per cent.

The method of early and frequent bougieing of the œsophagus to prevent stricture is warmly advocated by some surgeons. This practice is not free from danger. The author discourages the passage of hard instruments during the first two weeks following the injury, though he does not hesitate to inspect the œsophagus through the endoscope. For this no anæsthetic, either local or general, is given. The patient is in the dorsal or genu-pectoral position.

He divides the pathological changes following the injury into four stages:—(1) period of necrosis and desquamation of mucous membrane, (2) period of ulceration, (3) period of granulation, and (4) period of cicatricial contraction. The onset of the period of granulation is the time for commencing dilatation with bougies. These should be passed twice weekly, at first under the guidance of the endoscope, and later by touch only.

Though bougieing during the first and second periods is banned, gentler methods of treatment are of great value, and should be instituted from the first. These consist of distending the œsophagus with olive oil, introduced by means of a "seringue à tampon." This

consists of a slightly curved tube surrounded near its extremity by an air bulb. The projecting tip of the tube is introduced into the mouth of the œsophagus, and the bulb is inflated so as to block up the deep pharynx and prevent regurgitation. The oil is injected into the œsophagus through the tube from a syringe. It coats the surface of the œsophagus with a soothing film, distends its lumen, and prevents ulcerated surfaces adhering. In young children a "seringue à bouton" is used, in which the tampon is replaced by metallic buttons of different dimensions which can easily be changed. G. WILKINSON.

MISCELLANEOUS.

A Modern Method of examining the Salivary Ducts and Glands. ALBERT BARRAUD (Lausanne). (*Acta Oto-Laryngologica*, Vol. xvii., fasc. 2-3.)

It sometimes happens that we are confronted with cases of calculi or tumours in the salivary ducts and glands without being able to detect their exact position.

Thanks to injections of opaque substances into the salivary ducts under Röntgen-ray examination, substances which clearly show the outlines of the glands, we are able to make a very accurate diagnosis.

At the same time these injections, causing a dilatation of the ducts, may bring about an expulsion of the calculi in a painless way.

It may be added to the above résumé by the author that lipiodol is no longer used as the radio-opaque substance, because of its density. It is rather difficult to inject and pain may be caused.

Neoiodipine 40 per cent. (2·5 to 5 c.c.) was later used and is much preferred. H. V. FORSTER.

Some Remarks on the Teaching of Otolaryngology in the Medical Faculties. JEAN SZMURLO (Wilno). (*Acta Oto-Laryngologica*, Vol. xvii., fasc. 2-3.)

Otolaryngology, with its branches, logology, phonology, bronchoscopy and the study of deaf mutism, has become as great a speciality as pediatry, obstetrics, gynæcology and so forth. Its knowledge is necessary for a neurologist, ophthalmologist, child's physician and, especially, for a general practitioner. But the present teaching of otolaryngology is deficient in many countries; the courses last too short a time and are limited to the lectures in some nosologic entities, without giving the students a fair idea of the importance of oto-laryngology for the development of medical science. The practical exercises are too brief and do not give them the necessary familiarity. Examination in otolaryngology in some countries is not compulsory; in others it is limited to theoretical questions.

Abstracts

For the enlargement and deepening of the knowledge of oto-laryngology among general practitioners, reform of its teaching is necessary. It should consist in increasing the yearly number of hours for theoretical and practical work and the introduction in all medical faculties of compulsory examinations, theoretical as well as practical.

Author's abstract.

Radiosensibility and Caryoclasic Poisons. Dr. LEDOUX (Brussels). (*Acta Oto-Laryngologica*, Vol. xvii., fasc. 2-3.)

In studying the radiosensibility of normal and pathological tissues one soon recognises that of the two tissue elements, the cells and connective tissue, the former merits greater interest, though it is important not to lose sight of the latter.

Nowadays it is generally admitted that the problem of the malignant tumour is a problem of nuclear pathology and, whatever aggressive agent is used, whether physical or chemical, the nucleus is the terminus of attack.

It appears logical, therefore, to compare by the experimental method the different methods of assault upon the chromatin and also to study the methods of defence against attack brought into play by the nucleus.

The radiosensibility of cells varies widely. To take the skin, for example, the cells of the hair bulb are the most vulnerable and yet even these are not equally sensitive. Some succumb to the minimum of radiation; others resist and after a time give rise to new generations of hairs.

There is an important relation between radiosensibility and cell division. A quarter of a century has passed since Perthes established the law of sensibility during mitosis. There exist differences of sensibility for different cells, but for the same cells the state of chromatin condensation is a phase of particular vulnerability. This condensation, though chromosomial in cells about to divide, is pre-pyknotic in such cells as those of the cortex of the thymus gland.

Concerning the method of action of radiation on chromatin, Dustin has shown that "the lesions observed after radiation do not express the specific action of Rays (X or Y), but rather a peculiar sensibility of certain chromatins to diverse agents (and which he calls for this reason caryoclasic).

It was during his researches into the histo-physiology of the thymus gland that Dustin proved by experiment the existence of certain nuclear poisons:—

1. Acids or substances altering notably the *p*H value.
2. Certain derivatives of aniline oil.
3. Arsenic.
4. Diphtheria toxins, etc.

Acid shock attacks, for example, the little cortical cells of the thymus and the germ centres of the lymphatic glands and Peyer's patches, benzol, the cells of the bone marrow and so forth.

The article concludes by recalling the hypotheses of various workers regarding the mechanism of action of radiation upon the cell.

H. V. FORSTER.

Experimental Comparison of the action of Local Anæsthetics. B. FREYSTADTL. (*Acta Oto-Laryngologica*, Vol. xvii., fasc. 2-3.)

Several drugs producing local anæsthesia were studied with reference to their (1) rapidity of effect, (2) duration of effect, and (3) depth of effect. The last of these has been estimated by making use of the fact that slight anæsthesia results in the loss only of the sensations of taste and cold, while in deeper anæsthesia pain disappears, and only in very deep anæsthesia is the sense of touch lost.

The tongue was used for testing surface anæsthesia, and the lingual and inferior alveolar nerves with their areas of distribution in the tongue, the lips, and chin were employed for the examination of conduction anæsthesia.

Investigation of surface anæsthesia gave the following results, the drugs being arranged as regards their relative potency in descending order, the most active first in each series.

(1) *Rapidity of Effect.*—Pantocain, psicain N, cocain, alypin, percain.

(2) *Duration of Effect.*—Percain, pantocain, cocain, alypin, psicain N.

(3) *Depth of Effect.*—This depends very much on concentration, which has little influence on either rapidity or duration of effect. Pantocain 2 to 2½ per cent. has the deepest effect, sensation of touch being wholly lost. A deep effect is produced by cocain 20 per cent., alypin 20 per cent., psicain N 20 per cent., and percain 2 per cent., sensation of touch being much diminished, but not completely abolished. The effect of tutocain 2 per cent. and psicain 20 per cent. (excepting psicain N) is weaker than that of the preceding drugs. Novocain, even in a solution of 30 per cent., has an exceedingly feeble effect.

Tests of conduction anæsthesia gave the following results, using novocain 2 to 4 per cent. + adrenalin, tutocain 0·75 to 1 per cent. + adrenalin, percain 2 per cent. and pantocain 2 per cent.

(1) Rapidity was greatest with novocain and tutocain. Pantocain was slower and percain slower still.

(2) Duration was greatest with percain, which gave a period of anæsthesia longer than pantocain, and several times as long as novocain and tutocain.

(3) Depth of effect was most marked with novocain 4 per cent. + adrenalin, with which sensation of touch generally ceases, while with the other drugs it either remains unaltered or is only diminished.

THOMAS GUTHRIE.

Abstracts

New Peptone Treatment in Asthma and other Allergies. A. G. AULD. (*Lancet*, 1932, Vol. ii., 67.)

The author speaks of a year's trial of Witte's new peptone—peptone special 30—and considers it a valuable product, used in a 5 per cent. solution intramuscularly with a 5 per cent. solution of vegetable propeptone. He considers failures in peptone treatment to be due to (1) wrong dosage, (2) neglect to give a second or even a third course, and (3) the non-production of a mild pyrogenic reaction. Peptone also appears to give good results in numerous cases of hay fever.

MACLEOD YEARSLEY.

Hay-Fever: Some Observations of a Sufferer. DR. S. C. LEWSON. (*Lancet*, 1932, Vol. i., 1393.)

The author gives his personal experiences with very common-sense comments. He lays great stress upon three pathogenic factors—sensitivity, local abnormality, and psychological error, the last always of most importance and necessitating more wide recognition. Reviewing treatment, he finds pollacin of little value and liable to precipitate an attack; local applications disappointing, and often tending to aggravate rather than allay; medinal (gr. $2\frac{1}{2}$-5) nightly, useful in reducing the severity of the attacks; intramuscular injections of calcium successful; and ephedrin the most rapidly effective.

MACLEOD YEARSLEY.

The Treatment of Tuberculous Ulceration of Mucous Membranes by CO_2 Snow. R. NÜSSBAUM and B. TEBRÜGGE. (*Arch. Ohr-. u.s.w., Heilk.*, May 1932, Band cxxxi., pp. 227-230.)

Carbon dioxide snow is not generally used for lesions of mucous membranes. The authors give a very enthusiastic account of the excellent results which can be obtained in chronic tuberculous ulcerations of the mouth, pharynx and nasal cavities. Such ulcers are usually found in patients with advanced phthisis, but in spite of the bad general condition the ulcers can practically always be cured by the application of a mixture of CO_2 snow and acetone.

J. A. KEEN.

Specialised Features in the Vascularisation of some Sense Organs. Dr. MARIE-HÉLÈNE VALETTE (Bordeaux). (*Revue de Laryngologie*, May 1932.)

This beautifully illustrated article draws attention to a special arrangement of the vascular supply to some sense organs. This consists of a layer of enlarged venous capillaries and sinuses surrounding the sense elements and the terminal branches of their nerve supply, similar in structure to the erectile tissue of the inferior turbinal. The

illustrations show the microscopic appearance of this arrangement in the roots of the sensory hairs of the guinea-pig, the circumvallate papillae of the tongue of the guinea-pig, and the olfactory zone of the rabbit. The writer points out that this special vascular supply is in excess of the nutritive requirements of the tissues, and that it is confined to such sense organs as are exposed to the cooling action of currents of air. The view is expressed that the functional significance of this special vascular mechanism is to maintain the sense elements and the nerves supplying them at a constant temperature. She summarises the arguments in favour of this view as follows:—

1. They exist only in certain specialised organs, and in those in which they are absent, the fineness of perception of the organ is affected by variations in temperature.

2. When similar arrangements are found in other non-sensory regions (as the inferior turbinal) their heating function is accepted without question.

3. Granted that the arrangement is confined to the more specialised sense organs, we find it lacking in those organs which are protected from temperature variations by being deeply placed, as in the internal ear. G. WILKINSON.

LETTER TO THE EDITOR

NOSE-BREATHING IN THE NEW-BORN CHILD

TO THE EDITOR,
The Journal of Laryngology.

DEAR SIR,—The interesting remarks by W. Warwick James and Somerville Hastings on the above subject in the September issue of this *Journal* remind me of some observations I made many years ago, when I was in general practice and had more frequent opportunities of examining new-born infants than I can boast of nowadays.

What I am about to say is taken from an old case-book, as far back as 1894.

Normal respiration in infants is conducted solely through the nasal passages, probably because of suckling. So much so that when the nose is obstructed there may be as great a recession of the incisura, the intercostal spaces, and the lower ribs as in grave obstruction of the trachea. Only when the child cries is there respiration through the mouth.

These words were suggested by the following cases. The first I quote from memory; the second from my case-book.

(1) A badly nourished infant, a few days old, developed what appeared to be a cold in the head. As a result, the nose became