as far as can be seen, attached to the anterior commissure, but probably it is growing from the same spot on the left vocal cord at which the former growth was found. The growth is anterior to the vocal cords, which are freely movable; the arytænoids are slightly swollen. I intend to remove the growth with a laryngeal snare by the indirect method.

Hoarseness due to Singer's Nodes—Sir JAMES DUNDAS-GRANT, K.B.E., M.D.—Gradual recovery under rest of voice (restriction to pure whisper) and Curtis's humming exercises. The clinically inflamed tonsils were also removed.

The President emphasised the importance of lessons in voice production, and instanced a case occurring in a music hall singer; the hoarseness had been cured by this means alone without rest of the voice.

ABSTRACTS

EAR

On the Technic, Complications of, and Indications for Radical Mastoid Operation. WITTMAACK, K., Jena. (*Zeitschrift für Hals- Nasen- und Ohrenheilkunde*, Bd. 1, Heft. 1 and 2, 1922.)

The "ideal" result was obtained in 21 per cent. of the cases operated on in Professor Wittmaack's clinic. These were found to be cases in which the Eustachian tube was occluded. He therefore advocates a method of closing the canal which had given him the greatest satisfaction, namely, the obliteration of the ostium of the tube by means of knotted iodised catgut. He has found this quite free from danger. It takes the form of a chain of about four knots increasing in size at a distance of from 2-3 mm. from each other. This is drawn through the tube and the appropriately sized knot is caught in the isthmus. It is introduced by means of a bougie, to the outer end of which a fine silk thread is attached. This is tied to the iodised catgut for the purpose of pulling it through. The end of the catgut in the ear is cut as short as possible and pushed back into the entrance of the tube. A pediculated flap is then turned in from the posterior margin of the retro-auricular incision, and is pressed down over the tympanic ostium, being kept there by means of a plug of gauze. At the end of eight or ten days it is generally found to be adherent. The formation of the flap was described and illustrated in the *Proceedings of the German Otological Society*, 1910. He is of the opinion that this proceeding removes a great deal of uncertainty attached to the final result in the radical operation, and renders it,

therefore, more frequently acceptable as a prophylactic measure against complications than has hitherto been the case. Meningitis, preceded by labyrinthine symptoms, is "*the*" specially dangerous complication. Wittmaack considers that this is not so much due to operative damage to the capsule of the labyrinth or to the windows, as to injury of the internal structures of the labyrinth by a profuse effusion of liquid occasioned by a process of dialysis. To minimise this he advocates the most careful and thorough curetting of the floor of the tympanum and the niche of the round window, also the avoidance of firm plugging such as is effected by indiarubber sponges, which was found to be especially dangerous. He recommends the use of small glass drainage tubes covered with rubber. The tampon used for the fixation of the ordinary plastic flap is confined to the neighbourhood of the antrum, so that the whole of the median wall of the tympanum is free. Deafness of the opposite ear is naturally a contra-indication.

JAMES DUNDAS-GRANT.

A Case of Gradenigo's Syndrome. GUNNAR HOLMGREN. (*Acta Oto-Laryngologica*, Vol. iv., fasc. 4, 1922.)

A woman, aged 24, had suffered for two and a half weeks from acute otitis media of the right ear with mastoiditis. A rigor with temperature of 39.4° C. occurred on the day of admission to hospital. A Schwartze operation disclosed numerous large cells filled with pus behind the sinus and at the base of the zygomatic process, also in the angle between the dura and the sinus a cell of the size of a pea with pulsating contents, in direct contact with the dura mater. After the operation the condition was much improved, but a week later pain about the right eye was complained of, and after a fortnight double vision due to right abducens paralysis was noticed. Two days later there was severe headache and vomiting and the cerebro-spinal fluid was turbid and contained 2000 cells per cubic centimetre. The presence of an abscess in the apex of the petrous was suspected, and the radical mastoid operation was performed. The semicircular canals were then chiselled away, the cochlea being left untouched. Pus was then found "trickling out from below through a hair-like track"; this was followed up and widened, and a cavity the size of a bean was reached, filled with cream-like, markedly pulsating pus and situated medially and in front of the porous acusticus internus. The bottom of the cavity lay 3 cm. internal and anterior to the posterior semicircular canal, and with the probe the pulsation of the carotid could be felt. A wide drainage tube was inserted. At the end of a week the paresis of the abducens had disappeared, together with the signs of labyrinth destruction and a slight facial paralysis which followed the operation. Recovery took place with some hearing still remaining.

THOMAS GUTHRIE.

Ear

On the Diagnosis of Stenosis of the Eustachian Tube. HERMANN STREIT. (*Archiv für Ohren-, Nasen-, und Kehlkopfheilkunde*, Bd. 110, Heft. 1.)

In investigating the patency or otherwise of the Eustachian tube, Streit has found inspection of the drum-head during catheterisation more reliable than the method of auscultation, though neither modification of the test provides a certain means of diagnosis.

Suspecting that the degree of patency of the tubes was subject to wide physiological variation, Streit examined 750 normal individuals, taking the utmost precautions to eliminate disease, either past or present. In a great number of cases in which catheterisation was unsuccessful—apparently through no technical fault—it was possible to pass a bougie. A certain residue of cases of apparent stricture in the bony portion yielded after an interval of time, which in all probability allowed some temporary swelling of the mucous membrane to subside. It is important that a transient occlusion of the Eustachian tube may occur normally: treatment in such cases would be mischievous and unnecessary.

The cases in which it was possible to pass a bougie, after inflation had been found impossible, amounted to 4 per cent. This condition of relative stenosis, occurring in persons in whom the hearing tests and inspection of the drum revealed nothing abnormal, was bilateral in ten instances. In rather more than 1 per cent. the tubes were also impermeable to the bougie, although functionally normal.

Having summarised the pathological causes of obstruction of the Eustachian tubes, Streit concludes that the condition is often diagnosed on insufficient grounds, and that a relative stenosis, though possibly of importance in airmen or caisson workers who are exposed to rapid changes in atmospheric pressure, is of no significance in everyday life. WM. OLIVER LODGE.

Studies in the War Injuries of the Auditory Nerve. Dr TEOFIL ZALEWSKI. (*Monatsschrift für Ohrenheilkunde und Laryngo-Rhinologie*, Vol. vii., 1922.)

This report is based on the examination of sixty-six cases of gunshot injuries, affecting the Auricle, the External Auditory Meatus, the Tympanic Membrane, the Middle Ear, and the Mastoid Process.

The author points out that the main characteristic of these injuries is the frequency of involvement of the labyrinth, even where the auricle alone has been wounded—a condition which, of course, has been noted in this country, but which will possibly bear emphasising. He concludes with the following summary:—

1. Involvement of the labyrinth is almost characteristic of a gunshot injury of the ear; only in a few cases is this lesion not found.

2. The lesions of the labyrinth following concussion, shock, etc., must be regarded as serious. Recovery occurs very slowly, and is sometimes incomplete.
3. Cases of injury to the labyrinth should remain under special observation. They should be carefully examined before their return to the Front, and if their hearing is adversely influenced they should be withdrawn.
4. Artillerymen should be submitted to examination periodically, and those found with progressive labyrinth changes should be withdrawn from the Front.
5. It is advisable, in the artillery, to provide a duplicate service as it is only possible by such means to ensure the necessary maintenance of auditory function in men thus employed.

The article is almost restricted to a statistical and descriptive survey of the conditions. ALEX. R. TWEEDIE.

Case of Meningitis arising from Cells in the tip of the Pars petrosa. JOHN KARLEFORS. (*Acta Oto-Laryngologica*, Vol. iv., fasc. 3, 1922.)

This case was one of fatal mastoiditis and streptococcus meningitis in a woman forty-two years of age. The post-mortem examination showed extensive purulent meningitis which had almost certainly spread from cells in the tip of the right petrous bone. These were found filled with granulations and pus which had infiltrated the dura mater around the trigeminus. This condition probably explained the pain which the patient experienced in the right half of the face. Pain of this nature may therefore be regarded as of some diagnostic importance. THOMAS GUTHRIE.

NOSE AND ACCESSORY SINUSES

The Thiersch Graft in the Radical Cure of Frontal Sinus and Maxillary Antrum Diseases. EASTMAN SHECHAM, M.D., New York. (*Surg. Gynæcology and Obstetrics*, September 1922.)

The author claims considerable advantages from immediate skin grafting in cases of sinus disease in which a radical operation has been done. The diseased mucosa is eradicated, weeks of irrigation are avoided, and the nose becomes dry and free from dripping.

The graft is cut from the thigh, taking the papillary layers only. The sinus cavity is freed of diseased mucosa—dried with adrenalin and the graft applied. In the case of the frontal sinus the skin is fixed in position by small pledgets of cotton-wool packed tightly in the cavity and tied to long pieces of twisted silk. These are passed through the

enlarged fronto-nasal duct and out through the nostril. They are left *in situ* for six days. The cavity is not irrigated until the tenth day.

In the case of the antrum the skin can be held in place by a small inflatable balloon passed through the nose, or the cotton pledgets can be used and the mouth opening kept free until after the removal of the plugs. This method has the additional advantage of allowing the operator to inspect the newly implanted skin.

The method is also available for the implantation of skin into the raw tonsil bed after enucleation, and in this case a mould of the cavity is taken—covered with skin and the pillars of the fauces sewn over with mattress sutures. The mould and sutures are removed on the fifth day. E. MUSGRAVE WOODMAN.

The Acute Antrum. T. B. JOBSON. (*Lancet*, 1922, Vol. ii., p. 1060.)

The author compares the acute antrum with the acute appendix, and believes that sinus cases frequently go unrecognised, to the patients' detriment. He publishes five cases, four of which would probably have remained undiagnosed and drifted into chronic toxæmia, labelled "facial neuralgia," "arthritis," or "chronic nephritis," had not the practitioner been exceptionally observant. The author gives a useful résumé of the literature of toxæmia from sinus infections, and points out that chronic neuralgia, hemicrania, nephritis without a cause, pyrexia without a cause, chronic nasal catarrh, if with a cough, attacks of broncho-pneumonia or a history of frequently catching cold, nasal obstruction, tinnitus, obscure rheumatism or arthritis, optic neuritis, recurring nasal polypi, may all be secondary to sinus infection.

MACLEOD YEARSLEY.

The Diagnosis of Nasal Sinus Disease in Children. H. B. LEMERE. (*Archives of Pediatrics*, September 1922.)

The prevalence of sinusitis in children has only been recognised in recent years.

The symptoms are for the most part subjective, and the physician rather than the rhinologist is consulted in the first instance. Such indefinite symptoms, as anæmia, chronic digestive disturbance, loss of appetite, headache and nervous irritability, may often be the result of sinus infection. Frontal headache and redness of the pharyngeal wall just behind each tonsil should lead one to suspect the presence of nasal sinusitis.

The discharge of mucopus may be entirely post-nasal and may therefore escape notice.

The writer pleads for a closer co-operation between the pediatrician and the rhinologist so that the true nature of those cases may be more frequently recognised. DOUGLAS GUTHRIE.

Abstracts

"Lower Half Headache" (Neuralgic) of Nasal Origin. GREENFIELD SLUDER, M.D. (*Journ. Amer. Med. Assoc.*, Vol. lxxix., No. 23, 2nd December 1922.)

The author states that glossodynia, otalgia, nausea, parageusia, vertigo, photophobia, rhinorrhœa, and asthma may be isolated phenomena not related to "lower half headache" of nasal origin, but controllable from the post-nasal district.

Glossodynia is the most interesting and conspicuous of these conditions. Sluder confirms Dean's observation made in 1921, that this most distressing complaint can be controlled by cocainisation of the nasal ganglion, and permanent relief secured by alcohol-phenol injection of the ganglion. PERRY GOLDSMITH.

The Histopathology and Histogenesis of Benign Growths of the Nose and Accessory Sinuses. H. L. BAUM, M.D. (*Annals of Otology, Rhinology, and Laryngology*, June 1922.)

In Baum's opinion our classification of nasal growths should be revised in order to avoid confusion resulting from the loose use of terms with indefinite meaning. We should be able to differentiate nasal neoplasms according to their histogenic and pathologic characteristics, and not according to their morphology as we are now constrained to do.

Although many of the conditions mentioned in the paper are rare, it is the opinion of the author that if more rhinologists had acquaintance with the histopathology of the nose, the number of reputed cases would be greatly increased. It is not always sufficient to refer specimens to a clinical pathologist, because his knowledge of gross nasal pathology may be insufficient to aid him in the recognition of conditions which, while quite common in general pathologic diagnosis, might be rare and interesting specimens when considered in relation to their origin and causation.

The paper is illustrated with sixteen micro-photographs, and seventy or eighty references are given to the bibliography.

ARCHER RYLAND.

The Bacteriology of Ozæna. K. SAKAGAMI. (*Lancet*, 6th January 1923.)

There is already an extensive literature dealing with this debatable subject.

The writer summarises the results of his researches as follows:—

1. The coccobacillus, found only in ozæna patients, is identical with the coccobacillus of Perez.
2. Experimental ozæna may be produced in rabbits, and the serum of an animal immunised against the organism produces immune bodies with great intensity.

3. Although such immune bodies were clearly demonstrable in animal experiments, the reactions of the serum of patients is rather weak.
4. The coccobacillus may, as a result of those experiments, be regarded as the causative agent of ozæna.

MACLEOD YEARSLEY.

PERORAL ENDOSCOPY.

Tracheal Tumours. Dr GUISEZ. (*Bulletin d'Oto-Rhino-Laryngologie*, Paris, July 1922. Illustrated.)

Guisez reviews the present knowledge of new growths in the trachea, which he points out are rare. The relative frequency of malignant as compared with benign tumours is a point in which the trachea differs from the larynx. The author recounts the varieties of these growths, illustrating the endoscopic appearances. He draws attention to the importance of recognising primary carcinoma of the trachea or bronchus, and records cases of these conditions from his own experience; he mentions also sarcoma.

Treatment is next considered. Tracheoscopy is of first importance for diagnosis; for treatment this method must be reserved for the smallest benign growths, or for applications of radium. Even a very moderate growth is impossible to deliver through the glottis, and a tracheotomy should be performed. For primary malignant conditions two lines may be described. In a very favourable case a resection of the trachea may be entertained. Usually the best results will follow radium applied perhaps when the bulk of the tumour has been ablated, and preferably through a tracheotomy wound. Palliative tracheotomy may alone be possible. E. WATSON-WILLIAMS.

Relation of the Anæsthetic to Pulmonary Abscess following Nose and Throat Surgery. C. N. CHIPMAN, M.D., Washington, D.C. (*Journ. Amer. Med. Assoc.*, Vol. 79, No. 7, 12th August 1922.)

This paper deals with two series of pulmonary abscess following operative work on the upper respiratory passages. The first series number 145 cases, and the second 202 cases by Moore. In the latter, local anæsthesia had been used thirty-nine times and gas eight times. As to the origin of the abscess Chipman concludes that it may be either by aspiration or from embolism. Lastly, he gives a few practical suggestions on improving technic before and during operation, as a means of avoiding a lung abscess complication.

PERRY G. GOLDSMITH.

Abstracts

MISCELLANEOUS.

Chronic Infections of the Lower Airways. IRVING WILSON VOORHEES. (*Acta-Oto-Laryngologica*, Vol. iv., fasc. 4.)

There exists a large group of patients who suffer from an unrecognised chronic catarrhal infection of the respiratory mucous membrane. The infection is not merely a superficial one, but the bacteria live and multiply in the deeper layers, and in time bring about much connective tissue proliferation and serious functional changes. The treatment of such cases has hitherto been very unsatisfactory, and the tendency has been to rely too much on "indirect treatment" such as cough mixtures, and attention to the bowels, liver, and kidneys. The important points to be determined are the nature and chief habitat of the infecting organism. The cases can be dealt with by means of autogenous vaccines, which, when properly prepared, the author has found very satisfactory, and also by local applications directly to the region infected, whether in the subglottic area, trachea, or some portion of the bronchial tree. He favours especially for this purpose a 2-per-cent. solution of silver nitrate, a colloidal silver preparation known as "collene," and one or two per cent. dichloramine-T in an oily base. He lays stress on the importance of persistent and repeated applications of bactericidal agents—twice daily in all severe chronic cases.

THOMAS GUTHRIE.

Atoxodyne; a Completely Atoxic Analgesic. Dr GUISEZ, Paris. (*Bulletin d'Otorhinolaryngologie*, Paris, January 1923.)

Dr Guisez reports his observations on ninety-seven cases in which this product was employed for local anæsthesia. Tested on mice and guinea-pigs, it was less than one-tenth as toxic as novocain; in fact a dose sufficient for some operations on man produced *no* toxic effect on a mouse of 18 grams. The product can be obtained sterile in ampoules, in two strengths (Messrs Scherer, Boulevard Haussmann, Paris), and adrenalin is added at the time of injection. The solution without adrenalin is perfectly stable, and is antiseptic. The anæsthesia is exactly the same as that obtained with novocain.

E. WATSON-WILLIAMS.

Myxœdema of the Mucous Membrane of the Upper Air-passages. F. KELLNER, Hamburg. (*Zeitsch. f. Hals- Nasen- und Ohrenheilkunde*, Bd. 2, p. 247.)

Two cases are described. The thickness and monotonous character of the speech is explained by thickening of the tongue, and the infiltration of the mucosa of the aryepiglottic folds, the

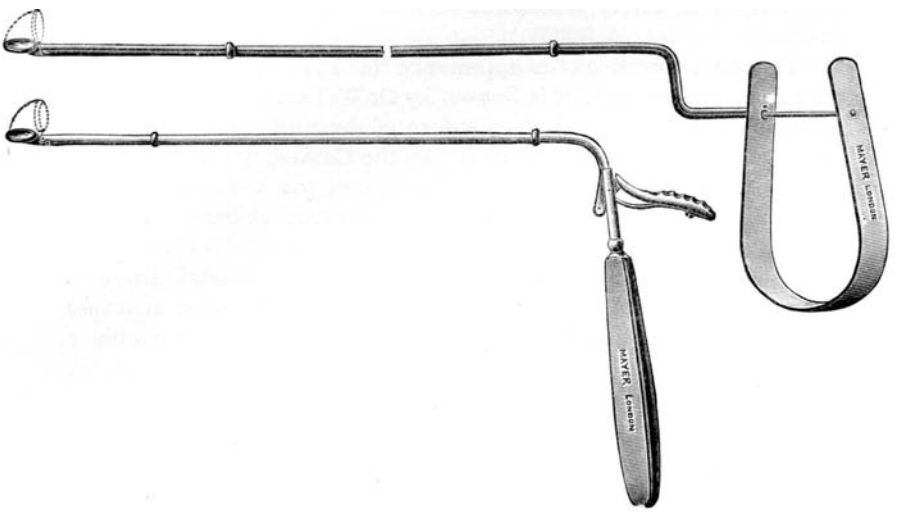
latter preventing the vocal cords from approximating completely. The loss of the sense of smell is due to infiltration of the mucous membrane of the nose, and the dullness of hearing to that of the Eustachian tubes. In doubtful cases of myxœdema an inspection of the upper air-passages may help in the diagnosis.

JAMES DUNDAS-GRANT.

ENDO-BRONCHIAL MIRROR.

Designed by Dr IRWIN MOORE.

AN adjustable magnifying mirror for employment with the bronchoscope in the direct examination of the lateral lobe bronchi; especially applicable for examination of the right upper lobe bronchus (since it is out of the direct line of vision) in cases of impaction of foreign bodies.



ENDO-LARYNGEAL MIRROR.

Designed by Dr IRWIN MOORE.

AN adjustable magnifying mirror for the direct laryngoscopic examination of the subglottic region. As expressed by members at the meeting of the Section of Laryngology, on 4th November 1921, difficulty has been experienced, in the past, in ascertaining by direct or indirect laryngoscopy the seat of origin of subglottic growths, or the extension of malignant disease below the vocal cords. This mirror, adapted from Michel's post-nasal mirror, can be adjusted to any angle, and may be passed through a direct endoscopic tube between the vocal cords, and the subglottic region—which has hitherto remained hidden, since it is outside the direct line of vision—may be thoroughly examined.

[These instruments were shown at the Meeting of the Section of Laryngology, *Roy. Soc. Med.*, 5th May 1922.]