ABSTRACTS

EAR.

My Method of Conservative Radical Operation. R. BÁRÁNY. (*Acta Oto-laryngologica*, Vol. iii., fasc. 1 and 2.)

The writer describes briefly the method of which he has given a detailed account in the *Medizinischen Klinik* for 1912. He draws attention to the following points. The attic is completely exposed in all cases, and the head of the malleus is resected with scissors when cholesteatoma lies in front of it. In most cases the incus is removed, but it is retained when it is still connected with the stapes or has the tympanic membrane adherent to it. Great importance is attached to the most careful examination of the tympanic cavity and the attic. Ten minutes are usually devoted to this part of the operation, and complete arrest of bleeding is secured by means of adrenalin. The cavity is packed with three or four pledgets of gauze covered with rubber-tissue which are removed after twenty-four hours. The post-aural incision is closed excepting at the lower end where a rubber drain is inserted. After the first dressing a loose gauze drain only is placed in the meatus in most cases; in a few, however, it is necessary to have recourse to firm packing with cauterisation and curetting. In the average case healing can be promised almost with certainty, and it may also be predicted that the hearing will be, at any rate, no worse than before the operation. Every patient who has undergone a radical mastoid operation should present himself from time to time to the operator for removal of wax and desquamated epidermal scales. The ear can rarely be treated as a normal one, even after the most successful operation. THOMAS GUTHRIE.

Acute Purulent Otitis Media in Children. JAMES G. CALLISON. (*Medical Record*, 5th March 1921.)

Acute purulent otitis media in children is practically always secondary to a naso-pharyngitis, spreading by means of infected material being forced up into the ear during the act of swallowing, coughing, or gagging, or in more severe cases by actual extension of infection along the mucous membrane. Very occasionally there may be a true hæmogenic implantation of the infecting organisms, in such systemic infections as typhoid and lobar pneumonia. The most common organism found is the *Streptococcus hæmolyticus*, next in importance is the *Streptococcus capsulatus*. Of the four cardinal symptoms of acute purulent otitis media pain, fever, discharge, and bulging of the tympanic membrane, only the last named is constantly present.

Abstracts

The most important prophylaxis lies in the removal of adenoids, for which purpose the writer prefers the La Force box adenotome. The essential treatment consists in making a free incision through the tympanic membrane, and this should almost invariably be made under general anæsthesia, and the best and safest is ethyl chloride. "The incision of the membrane should be begun by inserting the myringotomy knife deeply into the tympanic opening of the Eustachian tube and carrying the incision up across the tympanic membrane in front of the handle of the malleus, and if much inflammation, out on to the canal wall through the crucial ligament. The knife is then returned to the entrance of the Eustachian tube and the second incision is carried downward, backward, and upward behind the handle of the malleus."

The writer also advises that the naso-pharynx (even in infants) should be washed out by allowing some mild antiseptic to be instilled through the nose into the naso-pharynx.

Before incision of the tympanic membrane the use of drops is to be wholly condemned, since no absorption can take place through the skin of the canal or tympanic membrane and the actual condition tends to become masked by the altered appearance.

The ice-cap or hot-water bottle may be used to relieve pain. Following incision the canal should be irrigated every two hours, and three days later the following drops may be used for irrigation and drying:—

Tr. Iod.		♏ 15.
Ac. Carbol. . . .		♏ 15.
Spt. Vin. Rect. . . .		℥ ii.
Aq. dest. . . .	ad	℥ i.

Powders for insufflation or gauze drains are useless and dangerous. The ear should be dry and healed in three or four weeks' time; if not, adenoids and possibly tonsils should be removed. Should the discharge still persist then the question of opening up the antrum and cells arises even in the absence of more positive evidence of mastoid involvement. LINDLEY SEWELL.

Retro-auricular Drainage. C. J. A. VAN ITERSON, Leyden. (Communicated to the *Archiv. für Ohren-, Nasen-, und Kehlkopfheilkunde*, May 1921.)

Timely establishment of retro-auricular drainage in acute otitis media leads to rapid cessation of otorrhœa and remarkable freedom from complications. Though advocated several years ago by W. C. Phillips and M. Th. Zytowitch, this method has found little recognition in the standard otological text-books.

Acute otitis media is tantamount to an abscess in the tympanic

cavity, and as such requires, in certain circumstances, the provision of a counter opening. *In cases of acute otitis media, which after thorough treatment for at least three weeks show no tendency to spontaneous healing, retro-auricular drainage is indicated.*

Popular prejudice is an obstacle to the application of this principle; nevertheless, early antrotomy is an eminently safe and satisfactory measure in acute otitis, especially when local anæsthesia is practicable.

Albert Denker is willing to postpone antrotomy for six weeks, a period during which impairment of function may become permanent. Albert Bing's dictum that a surgeon should take a pride in healing cases of acute otitis without operation is open to similar objection. Retro-auricular drainage is not a method to be adopted to the exclusion of all others; for example, repeated paracenteses as advocated by Burger and Paul Ostermann may be very satisfactory in relapsing cases.

Douglas Guthrie's plan of operating upon children if adenotomy and conservative treatment for two to three months be unsuccessful, by performing the modified mastoid operation, necessitates, at all events, a greater invasion of the ear than does simple antrotomy at an earlier stage.

Comparison in bilateral cases between post-auricular drainage and alternative methods has convinced van Iterson of the superiority of the former.

Lubet Barbon recommends operation if the tympanic perforation rapidly increases in size. Van Iterson would prefer to anticipate such enlargement.

Caboche opines that an otitis may actually originate in the antrum, and cites four cases, apparently of this nature, which healed rapidly after antrotomy.

If Dench's conception that the antrum is invariably affected in acute suppuration of the middle ear be a true one, then the method of choice in the treatment of acute otitis media, in which the conditions enunciated above are fulfilled, would appear to be the operation advisedly described as retro-auricular drainage.

W. Oliver Lodge.

The Psychic Factor in Impaired Hearing. By Dr A. Blumenthal, Berlin. (*Monatss. f. Ohrenh.*, Year 55, Vol. viii.)

In a long article of 47 pages the author emphasises the necessity of recognising irregular responses to the functional hearing tests, and urges that these must be dependent on "psychic" variations in different patients.

He commences by quoting the results of testing 37 cases in which the "finding" corresponded with the generally accepted diagnosis of deafness due to impaired "sound-conduction." A similar account is

given of 19 cases where affection of the auditory nerve was the only lesion. This is followed by the narration of 8 cases in which both the sound-conducting and perceptive apparatus were involved with the expected result in response to the tests.

After a further discussion on these results, he quotes 46 cases whose impaired hearing could not be satisfactorily explained either by a pure affection of the sound-conducting apparatus, a pure nerve lesion, or even a combination of the two.

As attracting notice to such "irregularities"—which certainly no one will suggest are uncommon—the article may be of use, but its value is depreciated by the apparent omission of such data as the Wassermann reaction and the elimination of alcohol, tobacco, and other possible toxic affects. Perhaps, too, "psychic" is an epithet with which many will not readily agree, although admitting that "variation in attention" and "temperament" undoubtedly influence the response to tests which at present unfortunately are dependent essentially on entirely subjective reports of the patients. ALEX. R. TWEEDIE.

Experimental Studies on the Rotatory and Caloric Tests in Pigeons. G. V. TH. BORRIES. (*Acta Oto-laryngologica*, Vol. ii., fasc. 4.)

The author attaches great importance to the technique employed in these experiments and adversely criticises the methods of Ewald and van Rossem. The pigeon is firmly fixed in a pigeon-holder, which is attached to a revolving platform. The head is covered with a leather cap—an essential point neglected by Ewald. The pigeon thus fixed and with its head covered presents a strange phenomenon of great theoretical and practical importance. Both the head and the body remain perfectly still in the same position for hours. The bird seems to be transformed into a statue. If its head be then moved slightly to right or left, it will keep the new position indefinitely as if destitute of all power of voluntary movement. When slight turning movements of the pigeon-holder are made, it is found that the head does not follow these movements, but lags behind, keeping its axis constantly directed towards the same point in space like a compass needle. On turning the pigeon-holder a little more, for instance to the right, it is seen that the head at a certain point begins to move towards the right and then makes one or more quicker movements with the beak to the left. The author has shown by a series of experiments that this "reflex of direction" is evoked exclusively by rotatory (angular), and not at all by progressive (rectilinear) movements. Movement forward, backward, laterally or obliquely, produces no reaction, provided that the long axis of the pigeon remains parallel to its original position; while rotation extending over even a very small number of degrees of a circle gives marked head nystagmus. This

specific receptivity to rotatory movements and insusceptibility to progressive movements acts with the most minute accuracy. From these observations it is concluded that there exists a special mechanism capable of maintaining the position of the head unchanged, and of such a nature as to enable the pigeon while flying so high that the earth cannot be discerned, to appreciate the slightest deviation from its original direction. That this mechanism consists of the inertia and a special sense organ, namely, the semi-circular canal system, is proved by the disappearance of the reflex after removal of these canals.

It is well known that many birds possess an almost unaccountable sense of locality, and there has been much discussion as to the existence of a so-called "sense of direction." The author's experiments are of interest in this connection, showing as they do that a bird is able by the help of its semi-circular canal system to maintain a direction in space with complete mathematical accuracy.

The writer next discusses the hypnotic state in pigeons, the condition first produced by Kircher, in the year 1646, in the hen by drawing a chalk line before its eyes. At first sight this condition appears to be identical with that of the pigeon fixed in the pigeon-holder with its head covered. This is, however, not the case, since the pigeon with head-cap reacts only to rotatory (angular) movements, while the bird in the hypnoid state shows fixation of the head for both rotatory and progressive (rectilinear) movements. It can be shown, moreover, that this fixation for rectilinear movements depends upon the existence of binocular vision, and disappears completely when the head is covered. As a corollary of this it is important to notice that in rotation tests in pigeons without the head-cap, the post-rotatory nystagmus is influenced by voluntary and optic fixation of the head, and that, therefore, accurate rotatory vestibular experiments are impossible without the use of the head-cap. Hence the incorrectness of Ewald's observations.

Post-rotatory head-nystagmus in pigeons is recorded in the author's nystagmograms, and is capable of very accurate measurement. It is constant in normal pigeons, and is always rhythmical and follows the same rules as to direction as eye-nystgamus in man. The average duration of the nystagmus in the forty pigeons examined was found to be 16.2 seconds after turning to the right, and 16.3 seconds after turning to the left. The duration after turning to the right is always the same as that after turning to the left in the same pigeon and at the same sitting, but the absolute duration in different individuals and in different tests of the same individual shows considerable variation, though less than does eye-nystagmus in man. Rotation in both the frontal and sagittal planes also produces the normal post-rotatory nystagmus in the expected directions.

The "reflex of direction" above referred to was examined in thirty pigeons in various positions. It was constant for turning in the horizontal plane; slighter in the position with back down, and dubious or absent in the right or left lateral position, that is, in the plane of the external semi-circular canal. In both the frontal and sagittal planes it was either very doubtful or completely absent. After removal of the semi-circular canals this reflex disappeared for ever.

Kubo, Popp, and others, have failed to produce caloric nystagmus in pigeons. The author, however, succeeded without difficulty, the important point being the use of the head-cap. For the warm test, water at 60° was used, and for the cold test, ice-water. Of the thirty-eight pigeons examined four gave somewhat atypical results, while all the rest reacted normally. It was thus proved that caloric nystagmus is practically constant in normal pigeons as a result of simple douching of the auditory meatus, and that it follows the same rules as the eye-nystagmus in man as to the dependence of its direction on the temperature of the water and the position of the head.

On seven pigeons (that is fourteen labyrinths) bilateral removal (total or partial) of all three semi-circular canals was performed, while in one pigeon the six canals were plugged with silver amalgam. From all of these sixteen labyrinths a normal caloric nystagmus could be produced by syringing with hot or with cold water. For the first two or three weeks following the operation—possibly as a result of shock—the reaction was generally absent, but after that interval it was always present and well marked. Hence it must be concluded that the caloric reaction arises from the maculæ of the vestibule, or from the macula lagenæ. In all cases the rotatory reaction disappeared completely and permanently after destruction or blocking of the semi-circular canals.

The author intends to deal in a later communication with the theoretical consequences of these experiments.

THOMAS GUTHRIE.

NOSE AND ACCESSORY SINUSES.

A Critical Review of the Operative Treatment of Ozæna. Priv. Doz. KARL AMERSBACH. (*Archiv fur Ohren-, Nasen-, und Kehlkopfheilkunde*, May 1921.)

Amersbach discusses the relative merits of certain recently devised operations for the relief of ozæna, which aim at bringing the salivary secretion into contact with the atrophic nasal mucous membrane, as compared with methods such as the implantation of fat or bone grafts submucously.

Experience of implantation of Stensen's duct into the antrum of Highmore shows that the procedure may be attended with consider-

able difficulty, especially when the antrum is small and deeply situated. Other possible complications are obliteration of the new canal, and abscess formation in the parotid gland from ascending infection.

In spite of these difficulties, recorded cases show encouraging features, and open up attractive possibilities for the alleviation of this distressing complaint. One authority claims for his method that in addition to the relief of ozæna as a symptom, a restoration of the normal circulatory and nutritive conditions is brought about.

References are made to important contributions on the subject by Lautenschläger, Ortloff, and Wittmaack. W. OLIVER LODGE.

A Case of Extradural and Subdural Abscess following Frontal Sinusitis. J. H. BRYAN. (*Amer. Journ. Med. Sc.*, November 1920.)

A boy, aged 15, had undergone operation for acute frontal sinusitis, the anterior wall of the sinus being removed and external drainage established. Two weeks later, on account of persistent discharge, the wound was reopened and a sequestrum of the posterior wall removed, exposing the dura. At a third operation, ten weeks later, no further necrosis of bone was found. The cavity was irrigated. Four hours after this operation the patient complained of severe headache, and numbness of the right hand. After a further lapse of three weeks he was seen by the writer, who found the frontal region swollen and œdematous, though there was no headache or fever. A large flap was reflected and some softened bone was scraped away. Profuse discharge continued, and on one occasion a probe was passed up as far as the vertex of the skull. There were no cerebral symptoms during this period, which continued for several months. Bacteriology—non-hæmolytic streptococcus. The wound was then allowed to close. Six weeks later the boy was brought to hospital with severe headache, frontal swelling, and temperature 103. The frontal bone, apparently healthy, was partly removed, exposing an extradural sac containing pus under tension.

The patient remained comatose, and died a week later. Post-mortem examination showed thick pus covering the left cerebral hemisphere, subdural frontal abscess and extradural abscess. Streptococci were grown from the exudate. J. K. MILNE DICKIE.

PERORAL ENDOSCOPY.

Foreign Body in the Œsophagus for Nine Months. C. H. CARROLL. (*Lancet*, 1921, Vol. i., p. 1300.)

The body was a flat-barred safety brooch, open. The patient, a boy, aged 15 months, was brought to hospital with what appeared to be a superficial ulcer on the neck. When the scab was removed

a pin point was found projecting from the centre of the ulcer. X-ray showed the pin in the œsophagus. It was removed by means of the œsophagoscope and by cutting the point. MACLEOD YEARSLEY.

Congenital Stenosis of the Œsophagus. JEAN GUISEZ. (*Bulletin D'Oto-rhino-Laryngologie*, Paris, November 1920, p. 291.)

The author reviews 5 cases of this condition treated by himself. The youngest patient was four years old, the eldest thirty. In each case, there had been difficulty in swallowing, and regurgitation of food during infancy, and the patients, with one exception, had subsisted entirely on fluids. Each case had been diagnosed as spasmodic stricture, secondary to œsophagitis; these conditions existed, but were the result of the organic stricture. In every case the diagnosis was only made by direct œsophagoscopy. This showed a valvular flap occluding the cardiac end of the œsophagus, and leaving a passage, pinhole or slightly larger, guarded by a smooth edge. The œsophagus above the stricture was inflamed and dilated, and in one case its capacity was 2/3 litre. The treatment consisted in one case of internal œsophagotomy; in another of gradual dilatation; and in three, of dilatation and electrolysis. All the patients were completely relieved and continued to do well.

The author discusses the origin of this condition, which he compares to congenital stenosis of the rectum. In his view, there is a failure of complete fusion of the œsophagus and stomach, and persistence of a part of the diaphragm which should normally disappear during development. He points out further that the definite valvular flap, with a small opening at one side, can readily be distinguished from the star-shaped passage of spasmodic stricture, the non-valvular appearance of inflammation pure and simple, and the crescentic lumen of stricture due to external compression. Congenital stenosis was found in five out of 2000 œsophagoscopies.

E. WATSON WILLIAMS.

Treatment of Gangrene of the Lung by Intrabronchial Injections. JEAN GUISEZ. (*Presse Médicale*, 20th February 1921.)

The writer gives an account of 12 cases of gangrene of the lung treated by means of massive intrabronchial injections of medicated liquid. First the larynx is anæsthetised by repeated applications of 5 per cent. cocaine, and then the upper portion of the trachea by the instillation through the glottis of 2 to 3 c.c. of 2 per cent. novocaine. For this a special syringe and cannula are used, the latter being of sufficient length and with an appropriate curve to enable it to be passed between the vocal cords, and terminated by a bulbous extremity perforated by a ring of small holes. The patient

is in the sitting position and bends the body laterally with the convexity of the spinal column directed towards the side on which the lung is affected, in order to bring the bronchus of that side as nearly as possible in line with the trachea. After a few minutes the instillation of the fluid can be made. This is carried out slowly into the lumen of the trachea, and the cannula used is similar to that for the novocaine save that the orifice is single and terminal. The writer states that once the patient has become accustomed to the procedure, no cough is produced, and the whole injection is retained and can be seen by radiography to be in the bronchioles. For half an hour afterwards the patient must lie quietly on the affected side. The medication found to be most effective was 20 to 25 c.c. of "*solution huileuse goménolée*" in a strength of from 1/10 to 1/5. Menthol 1 per cent. and guaiacol 5 per cent. were tried and found less effective. The treatment was carried out every day, or more usually on alternate days, with a holiday allowed every few days by the omission of one injection.

Of the 12 cases quoted the first occurred in 1910 and the last in 1914. The writer found that as a general rule after a few injections the expectoration diminished and then disappeared along with the fœtor, the temperature sank to normal, the signs in the chest cleared up, and the general condition of the patient underwent a rapid and marked change for the better, until under the continued treatment a cure was established. Two cases suffered a relapse which yielded completely to a further course of treatment. Another case was that of an alcoholic, 59 years of age, and bilateral in the incidence of the disease. Treatment was continued for three months, till the lungs were thought to be well. Unfortunately death from pyæmia occurred just at this time, but at the autopsy the writer's view was confirmed as to the state of the lungs. In yet another case the gangrene developed at the site of a focus of active tuberculosis of old standing, with cavitation, and positive sputum. The treatment not only cleared up the gangrene but apparently acted so favourably on the older lesion that no further tubercle bacilli were found in the sputum. F. J. CLEMINSON.

MISCELLANEOUS

Observations during the Campaign, 1916-1918. A. COSTINIU, Bucharest. (*L'Oto-Rhino-Laryngologie Internationale*, February 1920.)

Costiniu attributed a certain type of acute otitis media to heavy bombardment. There was defective hearing, tinnitus, and less pain than in the usual otitis media. All were easily cured. In the acute otitis media with suppuration, due to war trauma, *i.e.*, caused by loud explosions close to the soldier, the writer concludes that 50 per cent. of cases had normal ears before the war. In 145 cases, 33 were

subjected to the mastoid operation, the Carrel-Dakin technique being carried out afterwards. In 90 cases of catarrhal otitis media, the ground had been prepared by affections of neighbouring structures, and bombardment played the part of the determining factor. Labyrinthitis was common, the condition clearing up rapidly on admission to hospital, and being due apparently to congestion of the inner ear. Wounds affecting the ear alone were uncommon and were nearly always accompanied by facial paralysis.

Seventy per cent. of all cases of typhus had ear complications—deafness, tinnitus, and intense hyperæmia of the naso-pharynx being the usual picture. Ten per cent. of these cases developed labyrinthine complications. In scurvy also, the percentage of ear lesions was high.

There were many cases of wounds of the frontal and maxillary sinuses. The procedure usually followed was open operation, and excision of the foreign body. Septal synechiæ were treated by the cautery and packing with boric vaseline gauze. The writer rarely saw wounds of the larynx. They nearly all died on the field. Also, the larynx was not often wounded, being protected by the chin, and being so movable. In the few cases he saw, the chief difficulty he encountered was in the treatment of cicatricial contractions, in the trachea and larynx.

In three patients who had been gassed the condition was a generalised œdema of the laryngeal mucous membrane. These cases cleared up under medical treatment. GAVIN YOUNG.

REVIEWS OF BOOKS

Diseases of the Ear, Nose, and Throat in Childhood. By DOUGLAS GUTHRIE, M.D., F.R.C.S.E. (A. & C. Black, Ltd., 1921.)

A useful little book in the well-known "Edinburgh Medical Series." It comprises upwards of eighty pages divided into three chapters, of which one is devoted respectively to ear, nose, and throat.

The illustrations, thirty in number, in the form of plain outline diagrams, are always clear and concise, and are in keeping with the objects for which the book has been written.

The author very rightly emphasises points of ætiology, and the fundamentals generally in the ear and throat diseases of childhood, and gives special attention to prevention, accurate recognition, and treatment.