The Ear

Dr W. T. GARDINER said that in some of the cases of ethmoidal and sphenoidal disease upon which he had operated, definite alteration in the bony and mucous membrane structures could be demonstrated, and that for this reason it was possible that there might be pathological conditions in structures in the vicinity of the optic nerve which did not show macroscopically in the nose, and that it might be advisable, therefore, for the nasal cavity to be examined clinically with a more critical eye than had always been the case hitherto.

Dr SYME said that he was convinced that sphenoidal sinus disease was much more frequent than was held by some, and in a number of his cases the lining membrane showed "chronic inflammatory changes."

The opinion of the oculists appeared to be divided. Some said that the fundi cleared up without operation on the sinus, others that this did not always occur, whilst others, again, said that some did not clear up even after operation. He (the speaker) would not be surprised if some cases were made worse by operation. It was possible that too energetic procedures on the sinus might be harmful. The subject was evidently, therefore, a very difficult one.

ABSTRACTS

THE EAR.

Heliobrom and the Ear. O. VOSS. (*Münch. Med. Wochenschrift*, No. 50, Jahr. 70.)

This contribution is mainly eulogistic of an antipruritic medicament called heliobrom, which the writer has used with considerable success to allay the worst forms of irritation and tickling in the external auditory meatus. He has also found it a decidedly curative agent in the various forms of scaly and weeping eczema of the auricle, the external auditory meatus and the vestibule of the nose.

JAMES B. HORGAN.

Increasing Deafness in Elderly People. ALBERT A. GRAY. (*Lancet*, 1924, Vol. i., p. 513.)

The author contributes some useful remarks upon this subject, and he insists, very rightly, that the first and most important step is to make quite sure that the patient is suffering from senile deafness.

Useful rules are given for differential diagnosis, and the author strongly advises the routine employment of inflation by Eustachian catheter, since upon this will rest the prognosis.

Dr Gray rightly deprecates local treatment in pure senile deafness.

MACLEOD YEARSLEY.

Abstracts

On the Therapy of Otosclerotic Deafness. HEINRICH HIGIER. (*Münch. Med. Wochenschrift*, No. 12, Jahr. 71.)

The observation that in two typical and profoundly deaf otosclerotics marked improvement resulted from an overdose of arsenic, in one case with suicidal intent and in another by the inadvertent swallowing of rat-poison, has suggested to Higier that we take, perhaps, an exaggerated view of the results accruing from large doses of this substance. He supports this conclusion by an allusion to the enormous intravenous doses of salvarsan and kakodyl which have been advocated by French writers in the treatment of epidemic encephalitis lethargica. JAMES B. HORGAN.

Central Disturbances of Hearing. GRAHE (Frankfurt). *Zeitschrift für Nasen, etc., Heilkunde.* Band 6, Part II., p. 498.)

In disease of the trunk of the auditory nerve the hearing for speech is much affected, bone-conduction for the a′ fork is shortened, the limit for low tones is raised, that for high tones lowered to a variable degree. When the medulla is the seat, there is generally only slight lowering of hearing for speech, and bone-conduction for deep-toned forks is often shortened. If the lesion is in the caudal part of the medulla the hearing defect is unilateral, but if in the frontal part it is bilateral, often most marked on the opposite side. Lesions in the fillet give results the same as those in the nerve-trunk but affecting both ears, especially the opposite one. Damage to the cortical centre shows various results but hearing for speech is only slightly diminished, bone-conduction is shortened only for deep-toned forks. The lower tone limit is normal or nearly so, the upper very slightly lowered. Both ears are dulled, but especially the opposite one; cases illustrating these conditions are narrated or quoted.

JAMES DUNDAS-GRANT.

NOSE AND ACCESSORY SINUSES.

Rhinosporidium Seeberi (*Kinealyi*). T. S. TIRUMURTI. (*The Lancet*, 1924, Vol. i., p. 802.)

The writer reports from Madras a case of this condition in a woman of 34 years of age. She had nasal obstruction for 20 years. A nasal polypus was removed in 1904, 1908, 1910, 1914, 1916, 1918, 1921 and 1922. On the last occasion the growth was examined microscopically and found to be rhinosporidial in character. Tirumurti is confident that a systematic examination of all nasal polypi removed in Madras hospitals would show instances of parasitic infection in women. This is the first case of the kind reported as occurring in a woman. MACLEOD YEARSLEY.

Nose and Accessory Sinuses

Rhinosporidium Seeberi (*Kinealyi*). W. LEONARD FORSYTH, M.B. (*The Lancet*, 1924, Vol. i., p. 951.)

The writer reports the case of a man, aged 55, resident on the west coast of India, who fifteen years previously had a small bleeding tumour in the left naris. The tumour persisted during the whole of this period until three months before his admission to hospital when it disappeared spontaneously. Suppurating growths, however, commenced on the left side of the face and head and the left lachrymal sac became swollen. Excision of the masses was carried out and the parasite of rhinosporidium was found in the sections. It is possible that in this case the patient inoculated the skin from the original nasal infection. MACLEOD YEARSLEY.

Nasal Diphtheria. THEO. E. MILLER, M.D. Chicago, Ill. (*Journal of Ophthalmology, Otology and Laryngology*, Vol. xxviii. No. 4, April 1924.)

For three days a child of six was unable to breathe through one nostril, from which came a watery discharge. There was no headache and temperature was normal, but the glands on both sides of the neck were enlarged. A dirty, grey, thick tough membrane completely covered the septal wall of the affected side; at no point did it extend to the outer wall. On detaching the membrane anteriorly the raw surface bled freely. Cultures from the nose and throat were positive. The membrane came away *en masse* after two injections of antitoxin. WM. OLIVER LODGE.

A Simple Method of treating Atrophic Nasal Mucous Membranes. R. v. SCHEVEN. *Münch. Med. Wochenschrift*, No. 39, Jahr. 70.

Though the number of cases treated and the period following treatment is as yet too small to form definite conclusions, the writer warmly recommends the following method of treating atrophic rhinitis of any type.

At least twenty injections, in each case of 2.5 c.cm. of a 10 per cent. sterilised solution of salt are made under the turbinal mucosa at the rate of three a week. The nose is washed out at home in the usual manner night and morning,

The injections are followed by transitory headaches.

JAMES B. HORGAN.

Acute Nasal Sinus Disease in Young Children. E. WATSON-WILLIAMS, M.C., Bristol. (*Abstract from Proceedings of the Royal Soc. Med.*, 1923, Vol. xvi., "Section for Disease in Children," pp. 81-84.)

It is with true nasal sinus disease as a clinical entity, occurring in children of three years old and under, that we are concerned. The

so-called "sinusitis of the new-born" is really an acute osteomyelitis of the maxilla, a much more serious condition.

The author's observations of disease at this age have been confined to the maxillary antrum. The special anatomical features of early life are considered: the small size and relatively large opening of the cavity make retention of the contents rare. When, however, retention can occur, even very young children are not immune from sinus disease exactly comparable to that seen in the adult. Recently attention has been drawn by several observers (quoted) to the occurrence of chronic sinus disease in children; this is seen to be by no means very uncommon.

Acute sinus disease, however, it would appear, is rarely distinguishable as such in the young. Two cases were shown to the Section and are described; in both, acute antral empyema occurred in boys of three years of age. There was plain evidence of pus in the cheek, confirmed by antral puncture. Operation relieved, but chronic sinus disease re-appeared later in one patient.

Neither skiagraphy nor transillumination were thought to be of great diagnostic value. Antral puncture should be made through the *middle* meatus. The small size and high floor of the cavity, and the proximity of the teeth, influence one both in this and when operating. The prognosis appears to be good. (Author's Abstract.)

Painful Recurrent Catarrh of the Frontal Sinus. H. Luc. (*Archives Internationales de Laryngologie*, December 1923.)

The author refers to a type of frontal sinusitis which he believes has not previously been described. He has observed this affection only in young women. The main clinical features of the cases are as follows: Recurrent attacks of unilateral pain; tenderness over one of the frontal sinuses with slight diminution of light on transillumination but without nasal discharge or swelling of the middle turbinal. Intranasal operation often repeated has failed to relieve the condition. External operation showed that the mucous membrane lining the frontal sinus was covered by a brownish viscid secretion, which is only removed with difficulty. The complete eradication of this material, however, led to a cure. A bacteriological examination of the secretion was found to be sterile. M. Vlasto.

Radical Operation on the Maxillary Sinus and Damage to the Teeth. Robert H. Ivy, M.D., D.D.S. (*Annals of Otology, Rhinology and Laryngology*, December 1923, Vol. xxxii., No. 4, p. 1197.)

Damage to sound teeth, resulting from the Caldwell-Luc or Denker operation on the maxillary sinus, might be due to (1) exposure of the roots of the teeth by the removal of the bone covering them; (2) destruction of their vascular supply or destruction of their nerve supply.

The writer points out that if the opening through the buccal wall of the antrum be made too low the roots of some of the teeth may be exposed. In such cases the resulting apical necrosis would militate against a successful antrum operation. None of the cases examined, however, showed any clinical or radiographic evidence of such a lesion. It is pointed out that the anastomosis between the dental vessels is so free that nothing short of dividing the vessel just as it enters the apex of the root would devitalise the tooth. Interference with the blood supply by those operations need not be considered.

Resection of a large portion of the outer wall of the maxillary sinus, however, must of necessity produce a resection of many of the dental nerve fibres. This is specially so in the Denker operation wherein the anterior dental nerve is always completely divided. Absence of sensation in a tooth, however, does not mean that the pulp is dead although a dead pulp is always associated with anæsthesia. Vitality depends on vascular and not nerve supply.

Of twenty post-operative cases examined at periods ranging from three months to two years after operation no radiographic evidence of injury to the periapical bone tissue or to the roots themselves was elicited. The vitality of the pulp was tested by means of the faradic current. Diminished or absent reaction was demonstrated, particularly in the canine and incisor teeth after the Denker operation. In practically all cases regeneration with recovery of sensation ensued in the course of several months. The writer considers that the condemnation of the radical operation by fear of deleterious injury to the teeth is unfounded.

F. Holt Diggle.

Retrobulbar Neuritis of Nasal Origin. E. D. D. Davis, F.R.C.S. (*Brit. Med. Journ.*, 10th November 1923.)

This paper is based on fifty-four cases of retrobulbar neuritis sent to the author by ophthalmic surgeons for nasal investigation. Of that number, only four gave evidence of undoubted nasal suppuration, and in three of them "a dramatically rapid improvement in the sight" was produced by removing the middle turbinal and opening the sphenoidal and posterior ethmoidal cells. The failure in the fourth case was considered to be due to optic atrophy. The author points out that the antrum can have no causal association with retrobulbar neuritis except in so far as sepsis in it may be secondary to ethmoidal suppuration, although toxic absorption from the antrum may have to be considered as a possible cause. Acute sinusitis rarely gives rise to optic neuritis; here, as in the analogous case of the facial nerve, it is the chronic infection of the adjacent bone cells that produces the condition. It is pointed out that the portion of the optic nerve

involved—the part lying in the optic foramen and canal—has lost its dural and arachnoid coverings and is enclosed only in its pial sheath. The fibres which supply the macular region lie on the temporal or outer side of the nerve, while the periphery of the field of vision is supplied by fibres which lie in the centre of the nerve-trunk. The author had hoped that in this fact there might be found some help in determining from the field of vision whether a case might be nasal in origin, but results were inconclusive.

His general conclusion is that retrobulbar neuritis is not so frequently of nasal origin as some writers have held to be the case, but that where all other possible causes have been excluded, and where there is the slightest suspicion of a nasal condition, the sphenoidal and ethmoidal cells should be opened. T. RITCHIE RODGER.

Retrobulbar Neuritis of Latent Posterior Sinus Origin, improved by Intranasal Intervention. VAN DEN WILDENBERG. (*Annales des Maladies de l'Oreille, du Larynx, du Nez et du Pharynx*, October 1923.)

Hesitation to operate on the nose is often disastrous in this condition. Reliance on the chance of spontaneous cure often gives disappointing results. In any case, spontaneous cure of the neuritis does not exclude sinusitis. The anatomical relations between the optic nerve and the ethmoid-sphenoidal labyrinth explain the ease with which the former may be infected from the latter. An empyema, an acute catarrh, an exacerbation of a chronic sinusitis, may each cause a neuritis. The duration of time of the neuritis should not contra-indicate operation whatever the length may be.

In two of the three cases reported, the sinus origin of the neuritis was diagnosed by elimination of the other possible causes. There was no sign whatever of disease in the sinuses macroscopically, while in the third it was only after the sinus was explored that its lining mucosa was found to be the site of chronic inflammation. All three gave satisfactory results.

The different methods of operation are discussed, external, intranasal, and median septal, the author preferring the last.

GAVIN YOUNG.

LARYNX.

Three Cases of Laryngeal Tuberculosis treated by Diathermy. Dr DE LAMOTHE, Paris. (*Annales des Maladies de l'Oreille, du Larynx, du Nez et du Pharynx*, September 1923.)

Encouraged by brilliant results in the treatment of intranasal tuberculosis, the authors treated certain forms of laryngeal phthisis also by diathermy. Although the cases are few and recent, the

results were so far satisfactory. Diathermy, however, will not replace the galvano-cautery in the larynx. After the use of the latter, a cicatricial zone is formed which prevents further extension of the infection. This is not so with diathermy, in which case the small amount of fibrous formation following the application is one of the chief advantages. The use of diathermy in the larynx is only justifiable under certain conditions. The patient must not be fevered, the lesion must be well localised, the pulmonary lesion must be small, and the expectoration scanty. The great risk lies in infection of the burn by the very virulent organisms which abound at the lesion. In effect, very few patients suffering from laryngeal tuberculosis are suitable for diathermy. Exception may be made in cases of involvement of the epiglottis, with dysphagia, and of the upper part of the larynx, while in cases where the base of the epiglottis, or the arytenoid region, is involved, repeated puncture may give good results. Three cases are quoted, with apparently good results, where the conditions fulfilled the limitations laid down above.

GAVIN YOUNG.

A Note on Recurrent Laryngeal Paralysis. WALTER G. HOWARTH, M.A., M.B., F.R.C.S. (*Brit. Med. Journ.*, 15th March 1924.)

The author thinks that paralysis of the vocal cord follows operations on the thyroid gland much more commonly than is supposed. In many cases it is overlooked because it causes no symptoms or disability, compensation by the other cord being achieved very quickly. A slight huskiness after the operation is attributed to the anæsthetic or to a cold and usually passes off within a week. The nerve breaks up into a leash of branches, usually two main ones and several smaller filaments, about an inch before it reaches the larynx. The muscular branch is the larger of the main divisions, and enters the larynx by piercing the inferior constrictor just behind the articulation of the inferior cornu of the thyroid with the cricoid. When the lateral lobe of the thyroid gland is manipulated during operation it is practically impossible to avoid pulling on the filaments of the nerve, and in some cases the muscular branch must be stretched round the inferior cornu of the thyroid cartilage. The main trunk of the nerve is probably seldom much disturbed. Again, the branches of the inferior thyroid artery run mainly with the filaments of the nerve which are liable to be damaged or stretched when the vessels are dealt with. This nerve is curiously vulnerable even to slight stretching, and although the majority of paralyses probably recover, many do not. The technique of the operation should be designed to avoid stretching of the nerve as far as possible.

T. RITCHIE RODGER.

Abstracts

Twenty-five Cases of Unilateral Paralysis of the Larynx due to War Injury—with Remarks on the Innervation of the Larynx. T. J. COLLET. (*Archives Internationales*, May 1924.)

The author has studied from the clinical, anatomical, and pathological standpoints unilateral paralysis of a vocal cord of traumatic origin. His remarks are based on a series of twenty-five cases collected during the War. The details of each case are described at length, and he arrives at the following conclusions:—

That traumatic paralysis of a vocal cord due to a war injury is due in the majority of cases to a lesion of the vagus and not, as is generally supposed, of the recurrent nerve. That a lesion of the vagus—right or left—is followed by cardiac disturbances of which the most frequent are tachycardia and arrythmia. The author adduces evidence to show that the presence or absence of cardio-vascular disturbances is an important point in determining whether the vagus or recurrent nerve is the injured structure. Finally, he asserts that his observations tend to show that there is no contralateral innervation of the peripheral nerves of the larynx, either sensory or motor.

M. VLASTO.

The Treatment of Paralysis of the Recurrent Laryngeal Nerve by Nerve Anastomosis. CHARLES H. FRAZIER, M.D., of Philadelphia, Pa. (*Annals of Surgery*, February 1924.)

The writer and Dr Chevalier Jackson discussed, in January 1923, the possibility of relieving bilateral paralysis of the recurrent laryngeal nerve by nerve anastomosis. Up to the time of this publication three patients have been operated on, and while sufficient time has not yet elapsed to make a final report, in two of them there is evidence of returning function.

Contra-indications.—Fixation of the crico-arytenoid joint. This should be tested by making passive motion with a laryngeal forceps through the direct laryngoscope.

Choice of Nerve.—In cases where end-to-end suture is not feasible the writer at once chose the descendens hypoglossi nerve both from anatomical and physiological reasons. The inferior cornu of the thyroid cartilage is given as the most constant and readily localised anatomical guide for finding the recurrent nerve or its stump, after injury from previously performed thyroidectomy.

The descendens hypoglossi is readily exposed on the sheath of the carotid vessels and affords sufficient length for transposition to the stump of the nervus recurrens.

The writer advises a number of dissections being done in the anatomy rooms before attempting the operation. He does the

operation, under local anæsthesia, through an incision along the anterior border of the sternomastoid.

A report is given of one case in which both sides were done. The right side was done first, and three months after the anastomosis Dr Jackson saw the patient and wrote: "Glottic chink on deep inspiration about twice as wide as before operation. There is more movement in the cord, and while the excursion is only slightly greater, it is, I think, sufficient to be unmistakable." Two months later again he reported: "A very encouraging feature of the improvement is the restoration of tonus and tension. The right thyro-arytenoideus which was apparently motionless before operation is now quite active." The nerve anastomosis on the left side was only done a fortnight before the second examination and report, too recently to have had effects for recording. NICOL RANKIN.

Some Results of Nerve Anastomosis. Sir CHARLES BALLANCE, K.C.M.G. (*The British Journal of Surgery*, Vol. xi., No. 42, 1923.)

In a paper dealing mainly with experimental work upon nerve anastomosis, the writer contributes a short section on "The anastomosis of the divided recurrent laryngeal nerve with the descendens noni nerve or with the vagus." Experiments were carried out on monkeys: in three experiments, a recurrent-laryngeal-vagus anastomosis was performed, and in three, a recurrent-laryngeal-descendens noni anastomosis. On cutting the recurrent laryngeal nerve in each experiment, the distal end was stimulated, and the vocal cord which had just been paralysed was seen to abduct in a normal manner.

In each animal the larynx was examined at intervals through the bronchoscope, and during the first 200 days no respiratory movement of the cord was observed. After six to eight weeks the inner border of the immobile cord became straight and tense in all the cases in which anastomosis had been carried out. Fifty days after a descendens noni anastomosis the wound was opened and the hypoglossal nerve proximal to the origin of the descendens branch, the descendens noni itself and the site of anastomosis were stimulated in turn; the vocal cord observed through the bronchoscope was seen to abduct. Seven months after the experiments on the recurrent laryngeal vagus, similar stimulation was employed, and abduction of the corresponding vocal cord followed. Subsequently, strong adduction was observed. The anastomosis, so far, had been a success.

The writer concludes his paper by discussing the question of the re-education of the vocal cord in man after anastomosing the recurrent laryngeal with another nerve. A. LOGAN TURNER.