

epigastric pain and tenderness are important as danger signals of severe heart complications. The association of late vomiting with gallop rhythm renders the outlook almost hopeless; (5) antitoxin does not affect the heart unfavourably, but on the other hand, its early use prevents the appearance of grave heart complications; (6) frequent examination of the heart and pulse in the second and third week of the illness is necessary, that being the time when severe heart complications most frequently occur; (7) broncho-pneumonia is a more frequent fatal complication of diphtheria than heart disease: sudden death from heart disease is very rare when patients are kept in bed for a proper period; (8) prolonged rest in bed is necessary in all severe cases; it is not necessary to keep all patients in bed who have cardiac murmurs and a pulse which is somewhat irregular and increased in rate. One should be governed by the stage of the illness and the patient's general condition. If no serious heart trouble has developed within four weeks, the patients are usually safe from this complication; (9) the heart murmurs and irregularity are of long duration in many cases, and make it necessary to watch the condition of the heart long after convalescence in all severe cases.

Macleod Yearsley.

NOSE, NASO-PHARYNX, AND ACCESSORY SINUSES.

Massei, F. (Naples).—*Nasal Diphtheria.* "Archiv. Ital. di Laringologia," Naples, April, 1904.

An important contribution to the literature of this disease in which the author describes the history, symptoms, diagnosis, and treatment exhaustively. Amongst many other practical points he thinks it would be prudent to regard most cases of *rhinitis fibrosa* as nasal diphtheria, though, of course, the possibility of the occurrence of *coccus* forms cannot be excluded. He prefers a serum of which 5 c.c. = 1500 units before one which contains only the same dose of antitoxin in a double or triple quantity of vehicle. For this reason he sets aside Behrings No. I and uses No. II (1000), III (1500), and VI (3000). As he considers the disease can under favourable conditions be aborted in twelve hours, the dose should be such as to render its repetition unnecessary. In children under six years No. II will suffice, but for greater security No. III is always used in Massei's clinic. Of course much depends on the earliest possible injection.

James Donelan.

Carbone, A. (Turin).—*A Contribution to the Study of Ocular Affections of Nasal Origin.* "Archiv. Ital. di Otologia," Turin, June, 1904.

The author has collected a large number of cases of eye affections arising from nasal disease in the polyclinic of Turin under his charge. Amongst the more noteworthy are the association of clonic blepharospasm and bleorrhœa with atrophic rhinitis; ciliary blepharitis, both pustulous and ulcerous, and palpebral phimosi with simple chronic rhinitis. Acute rhinitis is often accompanied or followed by catarrhal conjunctivitis, while in children with impetiginous rhinitis there is often pustulous conjunctivitis and phlyctænular kerato-conjunctivitis. In these cases the presence of the *Staphylococcus pyogenes aureus* has been demonstrated. Nasal diseases can determine the occurrence of two classes of ocular affections: (1) Reflex affections: blepharospasm, photophobia, lacry-

mation, asthenopia, reflex conjunctival injection from vaso-dilatation through stimulation of the trigeminus; (2) affections propagated by contiguity: acute simple coryza, influenzal coryza, diphtheritic and symptomatic coryza, purulent, erysipelatous, and chronic rhinitis.

In the majority of the cases, of which, however, no statistics are given, the author found the ocular symptoms disappear or become diminished with improvement in the nasal condition.

James Donelan.

Guarnacia, E. (Catania).—*A New Method of Treating Otomycosis Aspergillina.* "Archiv. Ital. di Otologia," Turin, June, 1904.

The author has successfully treated three cases of *aspergillus niger* by means of instillations of Merk's oxygenated water containing 20 per cent. of oxygen. Ten drops were instilled every two hours. It is of ætiological interest that two of the patients were employed in a tannery, while the third was a boatman carrying leather. It is well known that there is nothing like leather as a culture medium for *aspergillus*.

James Donelan.

Ferreri (Rome).—*Torticollis following Removal of Adenoids.* "Archives Intern. de Laryngologie," etc., November—December, 1904.

The author draws attention to the tendency of the operation to cause irritation in the ears, nose, and throat. He quotes two cases. In the first, that of a young girl, aged twelve, otitis had existed for some time, but had not been painful. A sudden cold caused the ear to suppurate, and on examination of the post-nasal space a large adenoid growth was found. It was removed under cocain and adrenalin at two sittings. After the second sitting the girl was seized with shiverings, headache, and a temperature of 104° F., dysphagia, and spasmodic twitchings of the neck muscles. Treatment by large doses of aspirin, hot applications to the neck, and a gargle of salicylic acid brought about a cure of the torticollis, as well as of the middle-ear suppuration.

In the second case, that of a boy aged eight, with adenoids, enlarged tonsils, and intermittent deafness, after operation the temperature ran up, the glands in the neck became swollen, and there was considerable rigidity and tenderness of the neck muscles. The condition was cured in twelve hours by hot fomentations.

Anthony McCall.

Turner, A. Logan.—*A Contribution to the Pathology of Bone Cysts in the Accessory Sinuses of the Nose.* "Edin. Med. Journal," October, November, December, 1903, and January, 1904.

The literature of this subject being scanty and consisting almost entirely of records of individual cases, Turner in this paper "endeavours to focus our knowledge of the subject and to furnish a number of illustrative cases."

Distension of the walls of the ethmoid cells, the frontal sinus, and the maxillary antrum have been described, but not of the sphenoid sinus. Air-spaces may exist in the middle turbinated bone, being formed either by the lower part of the bone being curved outwards and upwards on itself so as to form an air-space, or by actual hollowing out of the bone itself. These conditions may exist quite normally. Stier found them 8 times in 172 skulls, Lothrop in 18 per cent. of 200 skulls, Turner in 20 per cent. of 160 skulls. In Turner's series they were rather more frequent in female than in male skulls. With regard to relative frequency on right and left sides no difference was noted in either sex. The

symptoms of distension of the turbinated bones depend on the size of the enlargement and the amount of pressure exerted on neighbouring parts. The symptoms recorded are: (1) Nasal obstruction first on the affected, and later, when the septum becomes deflected, on the opposite side; (2) more or less anosmia; (3) change in character of the voice; (4) sometimes nasal discharge; (5) pain, varying from slight aching at root of nose to severe headache; (6) pain in the eye and lachrymation and photophobia (one case reported). Other symptoms, such as asthma and vomiting, are rare. Objective appearances vary. There may be external swelling, broadening of root of nose, even separation of the nasal bones from each other. The size of the intra-nasal swelling varies also in different cases, and has been compared to a pea, a bean, a nut, a pigeon's egg, a hen's egg. The effect produced on neighbouring parts such as septum, inferior turbinal, etc., naturally varies with the size of the cyst. Careful examination with the probe will generally enable the surgeon to distinguish this condition from all others. The contents of these cysts may be air, yellow viscid mucoid fluid, lemon-coloured clear cystic fluid, purulent or muco-purulent fluid; polypi have been found in some. Turner has found 46 cases of cystic enlargement of the middle turbinal recorded, including two recorded by himself. As regards the etiology, some of the cysts containing only air may reasonably be regarded as simple abnormal developments of air-cells naturally present in the bones. This view is supported by the fact that the ethmoid cells vary very greatly in their development, and by the fact that in certain cases no evidence of inflammatory changes in the bone or mucous membranes has been found. Other cases, however, are due to a slow form of osteitis. Lastly, in some of the cases recorded, in which polypi existed along with turbinal cyst, it is probable that the latter was not really a pathological condition at all.

The etiology of turbinal cysts containing mucous secretion at first sight seems simple enough, the exit for the secretion gets blocked, secretion continues and distension of the cell results; but Turner could find no mucous glands in the lining membrane of a cell in a normal turbinal, and none in the whole length of a cyst, and the majority of other observers have equally failed to find mucous glands in these cysts.

Turbinal cysts containing pus are merely cases of localised suppuration in an ethmoidal cell, the suppurative process being limited to the air-space in the middle turbinated bone (Grünwald).

Treatment consists in complete removal of the cyst by snare or forceps or both; and this can be performed through the anterior nares without any external operation.

Distension of the cells of the lateral mass of the ethmoid bone generally shows itself as a swelling at the inner corner of the upper eyelid, and often presents no nasal symptoms—empyema is not under consideration—and cannot be made out by intra-nasal examination. A few cases present swellings in the nose. The swelling is of very slow growth, generally painless, and may or may not interfere with the eye according to its position and size. It occurs in young people. Of the fifteen cases Turner finds recorded, in one age is not stated, in ten the ages were from twelve to twenty, in three from twenty to thirty, and the oldest was thirty-two. The contents were mucoid and in one case serous fluids. There is generally no discharge from the nose.

The clinical history and symptoms of distension of the frontal sinus are very similar to those of ethmoid distension. The swelling appears in

about the same position; it develops very slowly and generally painlessly, and displaces the eye outwards, forwards, and downwards. It occurs most often in young adults, but cases are recorded as young as seven years and as old as fifty-six years. Intra-nasal examination is often negative, but in some cases the middle turbinal has been pushed against the septum by an intranasal extension of the cyst. The contents are (1) air, (2) mucus, (3) pus. Two cases of great enlargement of the frontal sinus in which air only was found are quoted (Mejes and Röpke). In the second group of cases, viz. those containing mucus, the amount and character of the fluid varies greatly: it is described as "like white brain substance," "thick greenish tenacious fluid," sometimes like pus, but no pus-cells found on microscopic examination; cholesterol crystals are seldom found. In the third group, in which the contents are pus or muco-pus, it is probable that they were first mucous and became secondarily infected. When the primary condition is purulent the clinical picture differs from that of mucocele. Probably the whole process starts as a chronic inflammatory condition of the lining membrane of the cavity, closure of the duct resulting in accumulation of fluid in the cavity and consequent pressure. On the bony wall a rarefying osteitis sets in on the surface next the cavity, whilst on the outer or orbital surface a formative process takes place. As expansion increases the bone often disappears at its thinnest part. Turner does not think the old traumatic theory established or even reasonable, whilst Avellis's theory that these frontal cases are really mucoceles of the anterior ethmoidal cells growing into the frontal sinus may be true but lacks proof.

Diagnosis as between frontal and ethmoidal mucocele is often impossible; in the latter the swelling is generally nearer the inner canthus and displaces the eye forwards and outwards, in the former it extends somewhat upwards and outwards, occupying the middle and inner thirds of the eyelid, and displaces the eye downwards as well as outwards and forwards. It is, in the early stages, often difficult to distinguish this condition from exostosis or fibrous tumour. Cyst of the tear-duct and dermoid cysts must also be considered; the latter are rare. Lastly, some cases described and figured as simple distensions of the frontal sinus were probably of a malignant nature (sarcoma).

Treatment can seldom be satisfactorily carried out by intranasal operation; external operation will almost always be required, and it is generally best to make a free opening from the sinus into the nose, although some successful cases have been reported in which this was omitted.

Bone cysts in connection with the antrum of Highmore and the superior maxilla arise in connection with the different teeth. Their relation, therefore, to neighbouring cavities will depend on which tooth they arise from and on what size they grow to. Thus cysts of the incisor teeth encroach upon the floor of the nose and the hard palate; those in connection with the canine tooth become evident on the palatal surface of the bone. In the case of the bicuspids the cyst may expand the facial wall of the alveolar process and may press up the floor of the antrum; it is, however, in connection with the molar teeth that the cyst enlarges most frequently at the expense of the antrum. The facial wall of the antrum may be thinned and expanded, the cyst may grow inside the antrum and attain considerable size without giving any evidence on the surface of the jaw of its existence.

Clinically it may be difficult or impossible to distinguish between a bone cyst invading and expanding the antrum and a true hydrops

antri, if such a condition ever occurs, which Turner seems inclined to doubt. The bulging is in the outer facial wall of the antrum, not, as one would expect in hydrops antri, in the thin nasal wall, no connection can be found between the cavity and the nose, and there is never any history of discharge into the nose. On the other hand, there is not infrequently a history of bad-tasting discharge entering the mouth, which, of course, often occurs in chronic antral abscess. Sometimes it is possible after opening the cyst to perforate its distal wall and find a second cavity, viz. the antrum proper, or, as in one case, to open the cyst cavity which has no connection with the nasal cavity, then to open the antrum behind it through the socket of the third molar, or again histological evidence of the existence of two separate cavities may be found.

The fact that the cyst is connected with and discharges into the nose does not disprove its cystic nature, for it may rupture into the antrum. In such cases erroneous diagnosis may readily be made unless due attention is paid to the expansion of the antral walls. Therefore the facial, alveolar, and palatal surfaces must always be carefully examined. Other conditions which cause such bulging, e.g. tumour in the antrum, are generally easily diagnosed. The author does not discuss the ætiology of dental cysts. Most of the points discussed in the paper are illustrated by cases, and several excellent anatomical plates are given.

Arthur J. Hutchison.

LARYNX.

Anzinger, F. P.—*Three recent Cases of Croup due to Staphylococcus and requiring Tracheotomy.* "American Journal of Medical Sciences," November, 1904.

All three cases occurred in young children of from one to four years, and all followed attacks of more or less acute tonsillitis, but in none was any membrane found in the fauces or larynx. There was marked febrile disturbance in all, and two of the cases died in a few hours after tracheotomy was done, "apparently from profound toxæmia." In two cases the diagnosis of diphtheria was entertained and antitoxin given, but with negative results. Swabbings from the pharynx, the larynx, and the trachea showed practically pure cultures of staphylococci. Artificial cultures of the organism proved unusually pathogenic when injected into white mice.

Middlemass Hunt.

EAR.

Villar.—*Technique of the Operation for Anastomosis of the Facial Nerve.* "Rev. Hebdom.," October 8, 1904.

The writer describes the technique of the operations for facio-spinal anastomosis and for facio-hypoglossal anastomosis. Reference is also made to facio-glossopharyngeal anastomosis, though the latter is not described. The facio-hypoglossal operation is preferred, though admittedly it is rather more difficult. The reasons for this preference are: (1) The synergetic contractions of the tongue are not so distressing as those of the shoulder; and (2) the re-education of the facial muscles is more rapid since the facial centre in the brain is nearer to that of the hypoglossal than to that of the spinal-accessory.

Albert A. Gray.