

him there was a discharging sinus and a large cavity to obliterate and his operation was done only fifteen days ago. I removed the floor of the cyst so that the muco-periosteum may form granulation-tissue to fill the cavity. I agree with Mr. O'Malley if one removes all the bony anterior wall the cyst is easily peeled out, but if you attempt to peel out the cyst through a small opening the dissection is difficult. In the cases of cysts in the molar region the cavities healed completely in two months. In my experience opening and scraping without removing the cyst-wall has been decidedly unsatisfactory.

(To be continued.)

ABSTRACTS.

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Authors of Original Communications on Oto-laryngology in other Journals are invited to send a copy, or two reprints, to the JOURNAL OF LARYNGOLOGY. If they are willing, at the same time, to submit their own abstract (in English, French, Italian or German) it will be welcomed.

NASO-PHARYNX.

Three Cases of Naso-pharyngeal Fibrous Polypi.—Texier (Nantes).
 "Proc. French Soc. of Laryngol., Otol., and Rhinol."

If specialists be generally agreed that the sphenoidal region is the point of implantation for naso-pharyngeal fibrous polypi, general surgeons continue to hold the view that they are primarily pharyngeal, arising from the basilar fibrous investment, and invading secondarily the nasal fossæ. This persistence of opinion arises from the fact that they generally operate on large tumours with multiple insertions, and neglect examination of the cavum and nasal fossæ before and after intervention. In support of the contention of the former the author added three cases to those already published. One of them was especially convincing, since it was possible to observe and remove the polypus during its early development. It concerned a young man, aged twenty-eight, who had been suffering from right-sided nasal obstruction for several years. The tumour was purely nasal, and occupied the choana after the manner of a choanal mucous polypus. The cavum was absolutely free. Extraction was effected by the *serre-nœud* at several sittings. Its seat of origin proved to be the anterior wall of the sphenoidal sinus, which was freely removed. Histological examination confirmed the diagnosis of fibrous polypus. The two other cases concerned extensive growths, in one of which there was a pyriform prolongation on the face, the size of an egg, which, leaving the maxillary sinus intact, had reached the cheek *via* the sphenopalatine foramen, the sphenomaxillary and zygomatic fossæ. In both cases the seat of implantation was the region of the sphenoidal sinus, with points of attachment to the adjoining pterygoid process.

Aboulker (Algiers). In a child, aged eight, operated on for naso-pharyngeal polypus *per vias naturales*, the author clearly observed the

insertion of the growth on the nasal roof. On a superficial examination it appeared to be the vault of the cavum. This is a fact almost unanimously held to-day by surgeons who operate under control of the frontal mirror. What is less disputed is the point of insertion of naso-pharyngeal cancers; the author operated on a native by the trans-naso-maxillary route for epithelioma, which appeared to have arisen from the basi-occiput. The patient died three weeks subsequently. The autopsy revealed a tumour of the sphenoidal sinus. Posterity will say that for malignant tumours, as well as for naso-pharyngeal polypi, the place of origin is frequently extra-pharyngeal.

Moure (Bordeaux). Removed a polypus which appeared to be inserted at the postero-superior part of the pharynx, but which was in reality attached to the sphenoid by a small pedicle. The author thought it would be useful to know whether these polypi underwent involution after the twenty-fifth year.

Jacques (Nancy) operated on a patient, aged twenty-two, the subject of a naso-pharyngeal fibroma of rapid development. It was possible to extract the prolongations of this growth *via* the nasal fossa after forcible traction.
H. Clayton Fox.

Palatoplasty.—Castex (Paris). "Proc. French Soc. of Laryngol., Otol., and Rhinol."

Palatoplasty is a ticklish operation requiring certain operative "knack." Should it be performed in one or two sittings? In principle one sitting is preferable; there are, however, some cases which necessitate two sittings. The author exhibited a child on whom he had operated. At the first intervention he separated the flaps, and at the second united them. Operating in two stages is indicated in a child under five years of age, because at this period the flaps are thin, and the inflammation resulting from the intervention thickens them. Rose's position is to-day unnecessary; the patient can remain recumbent. The flaps must be detached very slowly and with gentleness. Revivifying should be done after detachment. The first sutures to insert are those nearest to the uvula. All kinds of sutures can be employed indifferently; the author, however, prefers those constructed of bronze. When the sutures are passed the author only makes a single knot so as not to risk tightening too much, and the threads are left in place until the flaps have united. Asepsis in this operation is not indispensable. It is interesting to keep the patients operated on under observation until adult age; if the operation has succeeded there will be perfect union, if there has been suppuration the tissues are badly united.
H. Clayton Fox.

E.A.R.

Dilatation of the Jugular Bulb, filling the Tympanum and Part of the Auditory Meatus.—Lannois (Lyons). "Proc. French Soc. of Laryngol., Otol., and Rhinol."

A woman with a history of seven years' aural suppuration presented a polypoid mass obstructing a part of the auditory meatus. Histological examination showed that the mass was not malignant. The author curetted the ear and removed some fleshy granulations; some time after-

wards he repeated the operation and noticed a large purple polyp, which was compressible and easily returned into the tympanum. It was a dilatation of the jugular bulb, bulged through a carious point of the bone, the result of neglected suppuration of seven years' standing.

H. Clayton Fox.

Study on the Structure of the Mastoid and Development of the Mastoid Cells: Influence of the Constitution of the Mastoid on the Evolution of Middle-ear Inflammation.—Mouret (Montpellier). "Proc. French Soc. of Laryngol., Otol., and Rhinol."

The classical division of mastoids into pneumatic, spongy, sclerotic and mixed types may be retained on the condition of replacing the word "sclerotic" by that of "compact." Sclerotic mastoid indicates a pathological condition, compact mastoid only an anatomical one. Density is a natural condition of this bone; instead of being the result of chronic suppuration in pneumatic cavities it is, on the contrary, one of the factors which predispose to the persistence of acute otitis and its passage into the chronic state. Eburnation of the mastoid tissue depends on—

(1) Non-pneumatisation of the bone.

(2) The inherent tendency which each individual possesses to form compact or spongy bone. This is shown by the fact that mastoids in very young subjects (one to two months old) may be already extremely compact.

A layer of compact tissue of varying thickness always exists around pneumatic cavities, which is homologous with the peripheral stratum of bone termed cortex. This pericentral layer is pericellular or central cortical.

So-called mastoid sclerosis is nothing else than eburnation of all the bone intervening between the two cortices; the eburnation may be complete or respect certain parts where the bone remains spongy. Development of pneumatic cavities accompanies that of the bone, and is completed when the growth of the bone has ceased. Nevertheless during this period of growth the pneumatic cavities may be formed early or late, according to the subject. This explains the divergence of opinions expressed by authors who have occupied themselves with the question. The outline of the antrum is in evidence from the fourth month of foetal life. At the sixth month it is frequently very large. Its high position in the newborn depends on the fact that the mastoid process, which is in full growth, has not yet carried the antrum with it downwards and backwards. Highly situated antra in the adult are always small. After the antrum the earliest cells to appear are those which are developed in the outer part constituted by the squamo-mastoid ala, which the squamous bone sends down on to the mastoid. These cells may be well developed from the seventh to the eighth month of foetal life. After these the next cells to appear are those of the outer attic and tympano-antral walls. At birth these cells may be very pneumatic. The cells of the squamous bone are thus the first developed. Then the cells of the petrous bone appear. They are developed in the entire circumference of the petrous walls of the petro-antral cavity, in the mastoid region, and in the petrous portion surrounding the internal ear. All these cells are formed by invagination of the tympano-antral cavity and communicate with each other. Those furthest from the tympanum and antrum are the last to develop. Five months after birth the cells of the subantral and peri-labyrinthine regions may be very advanced in development. At three years pneumatisation

may be complete in the base of the petrous portion. The petro-mastoid canal is independent of the pneumatic spaces, but in some cases the cells may by dehiscence of their walls open into its lumen. The squamous and petro-mastoid cells form two distinct systems, separated from one another by the external and internal petro-squamous sutures. Later on the separating wall becomes more or less completely absorbed and the two groups of cells communicate. The cells are usually arranged around the antrum and tympanum. In certain cases these cavities, few in number, appear disseminated in the midst of osseous tissue, and may thus form important groups situated at a distance from the antrum and tympanum, and from which they appear isolated; but however remote every cell is always connected with the others. An aberrant cell is never isolated, but always communicates with the antrum or some other cell.

Pneumatic cavities favour diffusion of antral infection into the depths of the bone. They also predispose to mastoid complications, but the symptoms of inflammation in pneumatic mastoids are more fulminating than those of spongy and compact structure, and in consequence attract notice more readily. Tympano-antral suppurations are, on the other hand, associated with milder symptoms, and are therefore more delusive, and in consequence predispose to chronicity. Spongy and compact mastoids are smaller than those of pneumatic structure. Prolapse of the sinus, a highly situated antrum and sagging of the cranial cavity, are more frequently met with in these types. Thinness of the tegmen tympani et antri is also more frequent in non-pneumatic mastoids, hence intracranial complications in chronic aural suppuration are more often met with.

H. Clayton Fox.

Reflections on Some Cases of Mastoiditis.—Mouret (Montpellier).

“Proc. French Soc. of Laryngol., Otol., and Rhinol.”

Periostitis and temporo-mastoid osteitis as sequelæ of otitis may occur (1) during suppurative otitis, (2) after its disappearance, (3) where there has been tympanitis, without the slightest symptom of suppuration. The osseous lesions may be situated in any part of the mastoid wherever there are cells; they may also occur in the midst of spongy or compact tissue in the vicinity of pneumatic spaces, and even in situations remote from any pneumatic cavity.

Periostitis may also be seated in several situations. The author distinguishes:

(1) *Superficial Temporal Periostitis*.—It manifests itself on the superior wall of the auditory meatus, around the meatus and above the insertion of the temporal aponeurosis on the posterior root of the zygoma.

Channels of infection: Notch of Rivinus, Glasserian fissure. Sometimes the petro-squamous canal, neighbouring cellulitis and osteitis.

There are two varieties—suppurative and granulating; they have a tendency to spread in the subcutaneous tissues—temporal, malar, pre-auricular and palpebral.

(2) *Deep Temporal Periostitis*.—Situated in the deep temporal fossa. Routes of extension: Temporal cribriform zone, petro-squamous suture, supra-glenoid zygomatic osteitis and external wall of attic. Characteristics: Diffuse deep fluctuation, trismus.

(3) *Antral and Sub-antral Periostitis*.—Situated in the region of the squamo-mastoid ala, limited by the squamo-mastoid suture. Way of diffusion is easy over the auditory meatus towards the area of superficial temporal periostitis.

Channels of extension : Chipault's cribriform zone. Dehiscence of the external cortex. Osteitis of the antral and subantral zones and from the cells bordering on the posterior wall of the meatus.

Characteristics : May sometimes be mistaken for abscess of a retro-auricular gland ; effaces the retro-auricular sulcus ; spreads along the upper attachment of the pinna to the superficial temporal region.

(4) *Superior Mastoid Periostitis*.—Located between the squamo-mastoid, masto-parietal, and the masto-occipital sutures. The insertion of the posterior mastoid muscles on the outer surface of the mastoid corresponds with the sinusal and cerebellar regions of the bone.

Paths of extension : Mastoid foramen and vein, osteitis, necrosis.

Characters : Less tendency to suppuration ; retro-auricular sulcus preserved.

(5) *Sub-mastoid or Digastric Periostitis*.—Situated between the styloid process, posterior border of the digastric groove and the inner surface of the apex and the inferior masto-occipital suture.

Channels of infection : Stylo-mastoid foramen, chief and accessory, vascular channels of the digastric and occipital grooves, osteitis, cellulitis.

Characters : Deep submastoid swelling ; spreads in the neck ; to be mistaken for Bezold's abscess.

Apical pain is not a sign of periostitis, but only of osteitis or endomastoiditis of the mastoid apex. Even in the absence of aural suppuration one cannot affirm that periostitis of otitic origin is unaccompanied by osseous lesions. Wilde's incision or any other similar measure can only, therefore, be a tentative intervention, although sometimes sufficient.

H. Clayton Fox.

MISCELLANEOUS.

Hæmolytic Streptococci in the Nose and Throat.—M. S. Tongs. "Journ. Amer. Med. Assoc." October 4, 1919.

In this interesting paper the author describes in detail the culture and morphological characteristics of the hæmolytic streptococcus. Interest has been aroused in this organism since the outbreaks of interstitial broncho-pneumonia following influenza, and a number of experiments have been carried out to determine the frequency of the occurrence in the mucous membrane of the nose and throat.

Examinations by culture were made in 567 dispensary patients, and of these 67 per cent. showed the presence of the *S. hæmolyticus* in the throat, while in only 5 per cent. was there a positive culture from the nose. Most of the positive throat cases were school-children with enlarged tonsils. A comparison was made of the results from cultures obtained from the surface of the tonsils with those obtained from the crypts. Of the cultures from the tonsillar surface 60 per cent. were positive, while of those from the crypts 83 per cent. were positive.

Of 342 persons examined at various periods after tonsillectomy only 17 throat cultures and 10 nasal cultures showed hæmolytic streptococci. Of 5 cases giving positive throat cultures remnants of the tonsils were present.

The author's conclusions are that "the tonsils, especially when hyperplastic, are a breeding-place for hæmolytic streptococci, and complete

tonsillectomy appears to be followed in most cases by the absence of hæmolytic streptococci from the throat."

A full summary of the literature on the subject is included in the paper.

J. K. Milne Dickie.

Pituitary Tumour.—A. W. Ormond. "Proc. Roy. Soc. Med.," August, 1919, Section of Ophthalmology, p. 37.

The patient was a female, aged twenty-six. When she came to hospital (August, 1918), she complained of inability to see with the right eye and also aching; vision in upper half of field only. About a month ago her eyes started twitching, and then the present condition set in. Both optic discs red and neuritic. Ozæna. Bad smell in nose. Suspicious streak of pus in naso-pharynx.

On September 30, 1918, further investigation was carried out as follows: Exploration of right antrum, left antrum, right sphenoid. Result in each case *nil*. Removal of anterior portion of each middle turbinal.

Ten days later: Pain at root of nose and over inner canthus. Headaches. Discharge from both nostrils, blood-stained. Attack of misty vision both eyes. Optic neuritis with ensheathing of veins of both eyes.

Three days later: Still offensive nasal discharge. Headaches persistent, and recurring almost daily. Still gets attacks of loss of sight. Is putting on flesh. Right eye: sees above and to outer side, but not to nasal side at all. Optic neuritis with ensheathing of vessels. Left eye field full to fingers, but things are not seen as clearly on nasal side as on temporal. Optic disc is red and slightly neuritic. Pituitary tumour (?).

Skiagram taken. Sella turcica very much enlarged, so much so that the body of the sphenoid seemed to be eaten away to a great extent.

The fields also are atypical, as the hemianopia seems to be more on the nasal side than on the temporal, and rather below.

The presence of optic neuritis on both sides, the fact that the patient is putting on weight and the appearance of the skiagram all seem to suggest pituitary tumour—probably malignant. Archer Ryland.

REVIEWS.

John Coakley Lettson, and the Foundation of the Medical Society of London. By Sir STCLAIR THOMSON, M.D., President of the Society. Pp. 62, with 4 plates and 14 figures in the text. London: Harrison & Sons. Price 2s. 6d.

Sir StClair Thomson is here figuring in the congenial rôle of praising famous men and the fathers that begat us.

Needless to say his brochure is pleasantly written, and it is nicely illustrated with figures of more than antiquarian interest.

To laryngologists the following excerpt will be of interest:

"The name of Babington is of particular interest to myself, in common with all who practise laryngology, for his son came near to inventing the