

ABSTRACTS

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The Differential Diagnosis of Otogenic Temporal Lobe Abscesses.
H. BRUNNER. (*Arch. Ohr., u.s.w., Heilk.*, 1932, Band cxxxi., pp. 136-154.)

Cerebral abscesses of aural origin are notoriously difficult to diagnose. One of the reasons is that non-otogenic inflammatory conditions of the brain sometimes arise in patients who happen to suffer from a chronic middle-ear suppuration on one or other side. Four such cases are described in great detail.

Man, aged 29, who had had a chronic ear discharge on the left side since childhood. He became ill with cerebral symptoms of the aphasic type. As the signs suggested a left-sided cerebral abscess, a radical mastoid operation was performed. The brain was not explored because the dura appeared to be quite normal. The patient recovered without further operation. Brunner's diagnosis was: *acute influenzal encephalitis of the left frontal lobe*, not in any way connected with the ear. The question is discussed as to whether encephalitis can arise as a complication of middle-ear suppuration. No definite answer is given. In the diagnosis very great importance is attached to the so-called *acute exacerbation* of the chronic middle-ear suppuration which always precedes the development of any cerebral complication. In this particular instance no such exacerbation was noticed. The cerebral symptoms seemed to arise spontaneously, just as they subsided spontaneously afterwards. The surgeon would have been justified in declining an exploratory mastoid operation because the acute exacerbation was absent.

A second patient, who died, was found post-mortem to have a *tuberculoma* in the left cerebral hemisphere as well as a left-sided *tuberculous otitis media*. It is assumed that the two conditions were blood-borne infections not directly connected with each other.

In a third case a radical mastoid operation was performed and the cerebral abscess was searched for in the temporal lobe. After death a chronic *frontal lobe abscess* was found on the corresponding side, also chronic suppurative bronchitis. The encapsulated frontal lobe abscess as probably metastatic in origin from the chronic lung condition (illustrations in text).

The fourth case was a child, aged 4, who developed acute suppurative otitis on the right side after scarlet fever. The otitis healed quickly and the tympanic membrane remained normal all through the subsequent illness. In spite of the normal appearances of the ear, earache and fever persisted, and three months later the symptoms

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(fits, etc.) suggested the diagnosis of cerebral abscess. The diagnosis was confirmed by an X-ray photograph after filling the ventricles with air. A large temporal lobe abscess was trephined for *above the ear* and drained, with subsequent recovery of the child. The difficulty in the diagnosis of this case is as follows:—On the one hand, the *position* of the temporal lobe abscess was quite characteristic of that of an otitic abscess, and a metastatic brain abscess complicating scarlet fever must be an extremely rare occurrence. On the other hand, the normal ear findings negated the diagnosis of a brain abscess complicating the otitis, but they did not altogether exclude an otogenic origin.

J. A. KEEN.

The Auditory Nerve in late manifestations of Epidemic Encephalitis.

G. PORTMANN. (*Revue de Laryngologie*, 1932, Vol. liii, pp. 3-34 and 191-233.)

It is, unfortunately, not possible to do justice to this important paper in an abstract for, under this modest title, Professor Portmann has given us a complete résumé not only of the aural manifestations of *encephalitis lethargica* but also of the differential diagnosis of the entire group of non-suppurative labyrinth lesions, with an excellent account of the course and connections of the vestibular nerve, including a comprehensive diagram.

The paper should be carefully studied in the original, but there are some points in particular to be mentioned. He draws attention to the great frequency of vestibular and cochlear signs in the later stages of *encephalitis lethargica*—nearly fifty per cent. of all cases—and reminds us that the “epidemic vertigo” of Gerbier, which figures in the text-books of medicine, was almost certainly the result of an outbreak of *encephalitis*.

On the evidence he produces it seems clear that the contractures, which are one of the most distressing results of the disease, are really “forced positions” due to interference with the vestibular tracts; further, he makes the interesting observation that these contractures are often relaxed by strong labyrinthine stimulation. (In this connection we may remember that bulbo-capnin, which is often used to allay the excitement in some forms of *encephalitis*, has the disadvantage of increasing the tremor and contractures, and Berggron has shown that bulbo-capnin has a selective depressing effect on the vestibular nerve.—*Abstractor's note*.)

The extremely variable results of the labyrinth tests in this condition are noted, and may be explained by the pathological findings—that the lesion is a glial invasion of the nuclei and tracts, not an affection of the end-organ. This is important as a vague idea is prevalent that the vestibular phenomena of *encephalitis* are “otolith

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reactions." Although in some cases the appearances suggest an otolith disturbance, on the evidence that Professor Portmann adduces there seems no doubt that such reactions are central, not peripheral, and the essential *physiological* cause is increased chronaxia of the vestibular nerve tract.

In conclusion, it is pointed out that frequently the attacks of vertigo are associated with vago-sympathetic dystonia and consequent alterations of blood pressure. Regulation of blood pressure and minimal doses of scopolamine form the basis of treatment from the otologist's standpoint.

There is an excellent bibliography.

F. W. WATKYN THOMAS.

Post-operative Sinus Thrombosis. G. KRIEGSMANN. (*Arch. Ohr-, u.s.w., Heilk.*, May 1932, Band cxxxi., pp. 164-179.)

Exposure of the lateral sinus during mastoid operations is generally considered to be without danger. In very rare cases sudden symptoms indicating sinus thrombosis arise a few days after operation, although at the time the exposed sinus appeared to be quite normal. This occurs more often after operations for acute mastoid abscess than after the radical mastoid operation.

The figures in the author's series were as follows:—In 241 antrotomies the sinus was exposed 183 times; in 58 cases the sinus was not exposed, and no complications arose in these 58 cases. Among the 183 cases the sinus wall appeared to be normal 132 times and altered 51 times. Of the 132 patients with a normal-looking sinus, 3 developed a *secondary thrombosis*, the condition which is under discussion. In two other cases the sinus was already thrombosed although the appearances to the naked eye and finger palpation were normal.

There were 86 radical mastoid operations in the series: in 63 of these there was no exposure of the sinus and there were no complications. In 5 cases the sinus wall was altered in appearance. In the remaining 18 cases the sinus wall appeared to be normal on exposure and in *one* of these a *secondary thrombosis* occurred which was possibly due to the operative exposure.

These special cases are described in great detail and are carefully analysed. The deciding factor appears to be the virulence of the infecting organisms. With a very virulent infection there is a slight risk that operative exposure of a healthy sinus may induce a thrombosis.

All the cases in which the sinus was not seen, healed without thrombosis. The obvious advice seems to be to avoid exposing the sinus whenever possible. However, this course of action would introduce another risk, *viz.*, the danger of not discovering a "latent" sinus thrombosis, or of not draining infected mastoid cells in the immediate

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neighbourhood of the lateral sinus, with subsequent invasion of the sinus from these foci. The second risk is the greater and therefore no alteration in the usual operative technique is suggested.

In dealing with acute mastoid infections the author is strongly in favour of the late operation ("Spätoperation"), never earlier than three weeks after the beginning of the acute otitis. In the three cases of secondary thrombosis a "Frühoperation" had been done (13th, 8th and 2nd day after the onset of the otitis) on account of severe pain and symptoms of labyrinth irritation. The "early operation" seems to increase the risk of sinus thrombosis following operative exposure of a healthy sinus.

J. A. KEEN.

NOSE AND ACCESSORY SINUSES.

The Arterial Supply to the Maxillary Sinus in the Adult. Anatomical Study and Surgical Applications. P. JACQUES and M. BLEICHER (Nancy.) (*Les Annales d'Oto-Laryngologie*, April 1932.)

Hæmorrhage during operations on the maxillary sinus is of frequent occurrence. Anatomists agree, however, that the thin antral mucous membrane is apparently very poorly supplied with blood vessels. It is, indeed, a difficult matter to discern the arterioles in the thin translucent lining membrane. The article in question seeks to explain this discrepancy by a minute study of the arterial vascularisation of the antrum. The main arteries supplying the antrum are the sphenopalatine, the infra-orbital and the more constant and important artery which is sometimes a branch of the internal maxillary and sometimes of the trunk of the infra-orbital. The fact that these arteries run their course either in the bony walls of the antrum or in subperiosteal fibrous gutters explains why the mucous membrane itself is relatively avascular. The author describes his method of compressing the main arterial supply in order to lessen the hæmorrhage during operations.

M. VLASTO.

The Significance of Allergic Nasal and Sinus Disease in Relation to Asthma. HARRY A. BAUM. (*Annals of O.R.L.*, March 1932, Vol. xli., No. 1.)

Although a large number of asthmatics suffer from nasal and sinus disease, this is primarily not an ætiological factor, but rather is it a manifestation of the asthma, and pathologically it is the same as the changes found in the mucosa of the trachea and bronchi. Nasal and sinus operations should not be performed primarily for the cure of asthma, only such surgery being done as would be indicated by the

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same findings in the upper respiratory tract of the non-asthmatic patient. "It is no more logical to expect to cure the allergy by removal of the cedematous membrane covering a turbinate, or lining an accessory sinus, than it is to expect to cure urticaria by excision of the wheal."

E. J. GILROY GLASS.

Some Intimate Studies of Nasal Function: Their Bearing on Diagnosis and Treatment. ARTHUR W. PROETZ. (*Annals of O.R.L.*, March 1932, Vol. xli., No. 1.)

An attempt has been made to evaluate the importance of the various processes of nasal physiology from a clinical standpoint, as an aid to determining the types of treatment which should prove the most rational and useful in the varying states of nasal pathology.

Ciliary Action.—This is regarded as the most important factor in the physiology and pathology. Ciliary currents follow well-established routes, which is always towards the pharynx and œsophagus, never towards the nostril. In the sinuses, the pathways converge to the ostium and an artificial opening made has little effect upon them, the mucus streams passing it by and continuing to emerge through the ostium.

Posture.—Has no effect on drainage if the mucosa is healthy, but plays a part when there is an accumulation of mucus.

Air Currents.—These extend through the middle and upper meatus in both inspiration and expiration, although taking a slightly higher route in the former. Amputation of the middle turbinal does not materially alter the route of the air current, but obstructions on either the medial or the lateral wall cause pronounced whirls and eddies.

Air Pressures.—Experiments on air pressure were carried out, with one manometer registering the pressure in the maxillary antrum, and a second, the pressure in the nasal cavity. If the ostium is patent, the pressure changes in the sinus and in the nose are identical. As the ostium narrows, there is a progressively increasing delay in the pressure within the sinus, but the ultimate peak pressures are not reduced. Restriction of the nostril gives an increase in the fluctuation of the pressure, whilst restriction of the choana causes a decrease. From these experiments, the author concludes that the exchange of air between the sinuses and the nasal cavity must be extremely slight.

Humidification and Heat Radiation.—Air passing along the nose is warmed and takes up moisture from the turbinals. In cases in which the turbinals are atrophied or have been removed, this function is greatly reduced.

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LARYNX AND TRACHEA.

Foreign Body in the Upper Respiratory Tract, Tracheotomy and Removal. J. N. ROY. (*Les Annales d'Oto-Laryngologie.*)

This is a description of the inspiration of an unusual foreign body in the form of a golf tee. A child, aged 12, was struck in the face by a door whilst he was carrying a golf tee in his mouth. A sudden inspiration caused it to be inhaled. Suffocation becoming imminent, the surgeon had recourse to an immediate tracheotomy. The scalpel—when the first two rings of the trachea were incised—nicked the pointed conical end of the tee. It was found that the circular upper end of the tee had been arrested by the larynx. The tee was eventually mobilised and removed through the tracheal wound. The author discusses the problem that had to be solved and submits that he was justified in carrying out tracheotomy in view of the urgency of the case.

M. VLASTO.

Bilateral Abductor Paralysis. W. B. HOOVER. (*Archives of Oto-Laryngology*, March 1932, Vol. xv., No. 3.)

Dealing with the causes of bilateral abductor paralysis the writer confesses that he has never been able to diagnose ankylosis of the crico-arytenoid joint, even of one side. The most common cause of the paralysis, in his experience, has been injury to the nerves during operation on the thyroid gland. The symptoms are hoarseness, stridor, dyspnoea on the least exertion, and a loud roaring noise during sleep. Tracheotomy is essential, and many authorities consider that nothing further should be attempted. The author, however, describes an operation which gives permanent relief in selected cases. He considers this operation (submucous resection of the vocal cords) superior to the operations of Réthi (displacement of cord), and of Jackson (excision of cord). The operation consists in preliminary tracheotomy, approach by laryngofissure, and excision of the mass of tissue between the vocal cord and the thyroid cartilage, the mucosa lining the larynx being preserved intact.

Eighteen cases of bilateral abductor paralysis are described in detail. In four of them the above operation was performed with good results.

The technique is clearly illustrated by drawings and photographs, and an extensive bibliography is given.

DOUGLAS GUTHRIE.

Pharynx and Tonsil

PHARYNX AND TONSIL.

Results of the so-called Tonsil and Adenoid Operation. Dr. J. KERR LOVE. (*Lancet*, 1932, Vol. i., p. 1356.)

The author gives the conclusions based on fifteen years' work at the instance of the education authorities of Glasgow and Dumbarton, the one urban, the other rural, and comprising 12,000 operations in the former and 11,000 in the latter. His final verdict is important:— That in talking of the tonsil and adenoid operation we are becoming slaves to a phrase, and that such operations do decidedly not represent the ultimate management of these cases. Emphasis is laid on four points: 1. Adenoids should be removed early, and the best results are obtained in the cure of mouth-breathing, if the operation be followed by training out of the acquired habit. 2. Tonsils may often be left unless actually septic. 3. Middle-ear discharge due to other causes—*e.g.* scarlet fever and measles—is not removed by operation on the tonsils or the post-nasal adenoids. 4. Nasal discharge is not always cured by these operations, but even in cases of apparent failure great improvement takes place in time. In this connection it is well to remember that neither nasal discharge nor mouth-breathing will be fully relieved if there be a badly deflected nasal septum or greatly enlarged turbinals. The author pleads for the removal of adenoids as soon as nasal obstruction occurs, leaving the tonsils unless they are evidently diseased; he finds that under this method he leaves the tonsils in 10 to 15 per cent. of the cases sent up for operation. Under present diagnostic conditions, Dr. Kerr Love considers “the highest skill is shown by the man who knows when not to operate.”

MACLEOD YEARSLEY.

Cavernous Sinus Thrombophlebitis following Tonsillectomy: Report of a Case. EDWARD H. CAMPBELL. (*Annals of Oto-Rhino-Laryngology*, March 1932, Vol. xli., No. 1.)

A female patient, aged 35, had her tonsils removed by the dissection and snare method, under local anæsthesia by infiltration, the anæsthetic used being 1 per cent. procain.

The following day her temperature was 100°, but she had no unusual symptoms, but during the next twenty-four hours had a rigor and developed a right peritonsillar abscess which was incised. Two days later there was swelling of the left side of the face and œdema of the eyelids, which rapidly increased, and within thirteen days of the operation the patient died with all the classical symptoms of cavernous sinus thrombophlebitis. The author suggests that the probable cause of this complication was the carrying of infected matter from the tonsil into the surrounding tissues by means of the needle during the infiltration of the anæsthetic.

E. J. GILROY GLASS.