

is in agreement with more recent anatomical research and clinical observations. The study of post-operative procedures and of the likely and predisposing causes of post-operative complications and the discovery of the ordinary method of infection should assist us to means of avoiding these complications. These means are found, according to the authors, in the judicious choice of the operative method, in the preparation of the patient, and in the performance of the operation. The most important point of this stage, which constitutes the fifth and last chapter, considers specially the employment of the endo-nasal method and the practice of trephining by the external route according as one finds himself in the presence of an acute sinusitis, of pan-sinusitis, or of a spreading cranial osteomyelitis. The authors sum up their work by drawing the following conclusions: (1) Let us be clear-sighted clinicians in our general and local diagnosis, and perform operations proportional to the resistance of the patient and the extent of the lesions. (2) Let us be eclectic surgeons without pinning ourselves to a systematic procedure, but doing all that is necessary and no more. (3) Let us be prudent and painstaking operators, and we will avoid the dangers inherent to intervention. Although we cannot hope ever to entirely be free from post-operative complications, such cases would exist as isolated exceptions. The treatment of frontal sinusitis should not make an exception to those of other affections which would necessitate the aid of surgery. We should add, nevertheless, that owing to the difficulty of treatment inherent to the anatomical situation of the sinus, frontal sinusitis ought always to be considered as a serious affection. This is why the authors consider that they cannot do better than terminate their conclusions with the words of Gerber, that "insufficiently experienced operators should withhold their hand." Rhinology should keep itself well abreast of the practice of modern surgery. This condition is necessary to our speciality in order that it can pretend to an independent place among the other branches of surgery.

*J. D. Lithgow.*

### E.A.R.

**Hammond, P.—A New Mastoid Retractor.** "Boston Med. and Surg. Journ.," June 27, 1912, vol. clxvi, No. 26.

The instrument may be used in combination with a tape passed through the meatus, or alone. It is self-retaining. It consists of anterior and posterior members, which resemble Volkmann's retractor, and when in use are placed within the corresponding margins of the wound. The connecting portion between the two members is shaped like a "wish-bone" and is reversible, allowing the instrument to be used for either ear, with this portion either above or below the operative field.

*Knowles Renshaw.*

**Mahler, L. (Copenhagen).—On the Pathological and Clinical Aspect of Otogenous Aseptic Sinus Thrombosis.** "Monats. f. Ohrenh.," Year 45, No. 11.

With a brief review of the only nine cases of this nature which he had been able to discover in the literature up to date, the author gives the following account of a man, aged sixty-seven, who came under his care April 17, 1911. The patient had had no affection of the ears till two months previously, when he caught cold, which was accompanied by pain in the right ear and a purulent discharge. For this he was treated in hospital and discharged fourteen days previously, since when he had been

quite well till four days ago, when the earache and otorrhœa reappeared. For the last two days the otorrhœa had ceased. He complained of right-sided headache and pain, but had no vertigo. There was slight tenderness of the mastoid, which was otherwise normal, sagging of the postero-superior meatal wall, pus in the fundus, small obvious perforation. Caloric nystagmus normal. Whisper *ad aurem*; bone-conduction greater than air-conduction. Temperature normal.

The perforation was enlarged in the tympanic membrane, but as the following day the headache had not abated the mastoid process was opened, the cells and antrum being found filled with granulations and pus.

All went well till April 22, when the temperature rose to 105° F. and the pulse to 120, accompanied with restlessness and muttering. No vomiting or convulsions. No nystagmus. Pupils equal and reacted to light. Reflexes increased. Kernig positive, neck stiffness. Lumbar puncture yielded about 10 c.cm. turbid fluid under strong pressure. Caloric response and hearing present in the right ear. As the cerebro-spinal fluid showed numerous polynuclear leucocytes and a Gram-positive coccus in small groups craniotomy was performed and the temporo-sphenoidal area explored, with a negative result, except an excessive flow of fluid. Then the posterior fossa was investigated, when the sinus was found surrounded by a thick layer of granulations and filled with a pink, firm organised thrombus. This was removed till venous bleeding occurred from both directions. Further exploration of the cerebellum was negative. The patient died that evening.

*Post-mortem:* There was a purulent convex leptomeningitis. No abscess. Remains of the thrombosis as found at the operation.

Histologically the thrombus was found to be in an advanced state of organisation, but no bacteria could be discovered either in it or in the granulation-tissue with which it had been surrounded, nor was there any sign of pus; moreover, no growth was obtained by culture.

A further critical survey as to the causes which may give rise to aseptic thrombosis, based both on the experience of this case and also on the other accounts already mentioned, with a reference to the latter, concludes the article.

*Alex. R. Tweedie.*

**Blegvad, N. Rh. (Copenhagen).—Otogenic Pachymeningitis interna purulenta.** "Arch. f. Ohrenheilk.," Bd. lxxxiii, Heft 3 and 4, p. 247.

Purulent internal pachymeningitis is commoner than we generally suppose, seeing that it forms one of the steps by which infection in the tympanic cavity may reach the soft membranes. In this report of two cases—one fatal and the other saved by operation—Blegvad supplies us with an analysis of the twenty-seven cases of the disease which he has found in the literature. Pathologically speaking, the disease process presents a gradation of local severity from inflammatory fibrinous exudation on the cerebral surface of the dura to abscess formation. At any stage in the process the disease may lead to purulent leptomeningitis, but it seems evident that sometimes a considerable period of time elapses before this dangerous event occurs. Cases are on record in which the abscess has penetrated the dura and has discharged through the ear or has led to a collection of pus on the surface of the skull. When subdural abscess forms it may lead to encephalitis with superficial necrosis of the brain tissue, cortical abscess or ulceration of the brain, and the consider-

able pressure upon the convolutions may flatten them and even lead to a depression on the surface of the brain.

Inasmuch as the disease process is usually associated with other intra-cranial complications, the symptomatology of this particular lesion is not so clear as to render its diagnosis easy, which is unfortunate, seeing that the prognosis in cases of timely operation is extremely good, the advance of infection towards the soft membranes being effectually checked.

If an abscess forms the pressure upon the cerebral cortex induces ocular paralyses, aphasia, Jacksonian epilepsy and contra-lateral paresis, but although pyrexia is common and the pulse-rate frequently raised, the symptoms are not sufficiently definite to enable a distinction to be made between subdural abscess and cerebral abscess. The cerebro-spinal fluid, in the cases in which it was examined, was clear and showed little or no increase in its cell elements.

The treatment of simple subdural inflammation or abscess presents no difficulties, since effective drainage can be secured by an incision through the dura without any very free removal of bone.

*Dan McKenzie.*

**Rejto, Alexander.—A New Method of Examination of the Labyrinth (Bárány's Pointing Test).—**"Pester Med.-Chir. Presse," No. 20, 1912.

Bárány's pointing test is a method of displaying the deviation of the skeletal muscular movements resulting from labyrinth disorders. It is conducted as follows: The patient having closed his eyes, he is made to stretch his arm fully out, and to touch with his finger the finger of the examiner. Then he is asked to sink his arm to his knee and once more to raise it so as to touch the surgeon's finger, again. In normal cases the attempt to do so is always successful, even when the arm is stiff or parietic. In labyrinth, and also in cerebellar troubles, the arm and finger deviate during this movement in a direction opposite to that of the nystagmus.

[That is to say, the arm deviation takes the same direction as the slow component of the nystagmus.—D. M.]

*Dan McKenzie.*

**Ruttin, Erich.—On Recent Traumatic Lesions of the Labyrinth.**  
"Monats. f. Ohrenheilk.," No. 4, Year 46.

Six cases are quoted in detail, all the result of a fall in which the labyrinth was affected, and all of which recovered without operation, although various labyrinth symptoms persisted at the time of writing.

From these cases the author differentiates the following types of labyrinthitis: (1) Diffuse traumatic labyrinth destruction. (2) Diffuse traumatic lesion of the labyrinth. (3) Circumscribed traumatic labyrinth lesion.

No. 1 must be regarded as the result of fracture or fissure of the labyrinth with hæmorrhage into its interior, causing irritation or destruction of its soft parts.

In Nos. 2 and 3 there is probably no fracture, and the injury is of a comparatively mild degree.

The conditions, symptoms, and prognosis are well summarised in the following table:

Symptoms.		Various.	Caloric reaction (if available).	Rotation reaction.	Prognosis.
Cochlea.	Vestibule				
Diffuse traumatic destruction of labyrinth	Deaf. ? tinnitus Nystagmus, rotatory to sound side; dizziness; vomiting; disturbance of equilibration	Mental hæmorrhage? discharge of fluid? facial paralysis? If unconscious eyes directed to the side of lesion	—	—	Deafness; loss of caloric reaction; tinnitus? no giddiness.
Diffuse traumatic lesion of the labyrinth	Deafness or marked depreciation of hearing; tinnitus	Mental hæmorrhage? discharge of fluid? facial paralysis?	Lack of response on simultaneous irrigation of both ears	No reaction as regards the horizontal and anterior canal	Deafness or depreciation of hearing; tinnitus? giddiness?
Circumscribed lesion of the labyrinth	Range of hearing reduced, tinnitus Nystagmus, rotatory to the sound, the diseased, or to both sides. Dizziness; vomiting; disturbance of equilibration?	—	Not affected	Not affected	Depreciation of hearing; tinnitus? dizziness?

This table, preceded by a very able debate on the cases and the types to which they belong, should be of great service towards the description, diagnosis, treatment, and prognosis in lesions of the labyrinth.

*Alex. R. Tweedie.*

**Kerrison, Philip D., M.D.**—**The Vertigo of Vestibular Paralysis.** "Laryngoscope," October, 1911.

In addition to the vertigo of vestibular irritation, so generally recognised, there is also a form of vertigo due to loss of vestibular function which has so far escaped notice. The accepted features of "vestibular vertigo" are its occurrence during the acute stage of labyrinthine irritation, its constant co-existence with nystagmus, and with a subjective sensation of the rotation of surrounding objects.

If Bárány's law be accepted that vestibular vertigo is invariably accompanied by vestibular nystagmus, then when the nystagmus has subsided the vertigo must of necessity have also ceased.

The author maintains that this is not always so, but that it will be frequently found that after the vertigo and nystagmus due to vestibular irritation have subsided another variety of vertigo may be present due to loss of vestibular function. It is characterised by being only noticed on the performance of sudden unaccustomed movements, and differs from the former variety in the absence of nystagmus, sense of rotation, or a tendency to fall in any given direction.

The occurrence of this condition is explained by the defective orientation due to loss of vestibular function. When the vestibular function is lost its place in the orientation of the body has to be taken over by the muscular, arthro-dial, tactile, and visual senses.

This readjustment takes a variable time in different subjects, and until it is completed there will be a liability to vertigo on sudden and unusual movements. Thus a man, aged twenty-eight, who has become suddenly totally deaf as the result of a syphilitic infection, showed complete absence of both the caloric and rotatory vestibular reactions, but yet complained as much of vertigo as of deafness. He was compelled to keep his eyes on the ground while walking, but could walk straight and stand steadily with his eyes shut. He had no nystagmus, sensation of rotation, or tendency to fall in any given direction.

Since both vestibules were inactive his vertigo was presumably due to the as yet incomplete compensation by the other senses.

*A. J. Wright.*

## PHARYNX.

**Badgerow, Geo. W.**—**Pharyngeal Suppuration: Course and Direction of Various Types.** "Lancet," March 23, 1912, p. 780.

After considering certain points in the anatomy and physiology of the pharynx, the aetiology of pharyngeal suppuration is discussed, and the various types, are classified, according to the seat of origin, as (1) lymphoid, (2) submucous, (3) subaponeurotic, (4) prevertebral. The first is by far the commonest. In the second dysphagia is the most prominent symptom. The most important structure in connection with the pharynx is the pharyngeal aponeurosis and its attachments. The muscles are important because their involvement gives rise to one of the most characteristic symptoms—dysphagia.

*Macleod Yearsley.*