

to fifteen minutes is allowed to elapse before operating. An assistant is required to hold a tongue depressor. The tonsil is dissected from the anterior pillar from above downwards, it is then seized with forceps and pulled forwards, while it is shelled out of its bed; a snare is passed over the tonsil and tightened till it cuts through the remaining attachments.

Knowles Renshaw.

Koplik (New York).—Infections following Tonsillotomy, with a Consideration of the Forms of such Infections. "Amer. Journ. Med. Sci.," July, 1912.

Having referred to the various infective processes of which the tonsil *in situ* is regarded as the port of entry, the author remarks that operative measures such as tonsillotomy or enucleation must open up a still larger area to the risk of infection. He has observed that after these operations certain forms of infection are apt to arise, and he expresses surprise that those whose work lies in this field of surgery are not impressed with this danger.

Three distinct varieties of septic infection following removal of the tonsils have been observed by the author: (1) The form in which there is obscure fever for a week or more without any endocarditis or other lesions. (2) Those cases in which fever is accompanied by endocarditis of either a mild or a malignant type. (3) A form in which the infection is evidently severely hæmatogenous and causes destructive blood changes, with signs of sepsis, such as profuse hæmorrhagic ecchymotic areas on the surface of the skin, petechiæ, severe hæmorrhages from the bowel, and areas of broncho-pneumonia.

Thomas Guthrie.

E. A. R.

Kopetzky, Samuel J., M.D.—Meningitis: Its Nature, Cause, Diagnosis, and Principles of Surgical Relief. "Laryngoscope," June, 1912.

The factors underlying the clinical picture are the same in all types of meningitis. The toxic effects from infection of the fluids and tissues of the central nervous system are due to the same tissue reactions whatever the invading organism. As a result of this invasion the available carbohydrate in the spinal fluid is early used up and disappears. This disappearance of the copper-reducing body, excepting in the slowly developing tuberculous infections, is probably the earlier sign of the activity of bacteria in the central nervous system. An early means of diagnosis is thus afforded in cases of suspected meningeal infection, which clearly differentiates meningitis from all other diseases with similar clinical symptoms. Thus, the author found that in thirty-four specimens of cerebro-spinal fluid from cases with meningeal symptoms, but no meningitis, copper reduction was present in all, whilst it was absent in all of thirteen cases with acute meningitis, either otitic, meningococcic, or tuberculous. Owing to some previously undetermined primary factor in meningitis a vicious circle is set up. On the one hand an increased amount of cerebro-spinal fluid, and on the other œdema of the brain and meningeal tissues, act in the limited space of the cranial vault, and exert a compression force on the blood supply, therefore tending to increase the œdema. The author suggests that this primary factor may be the using up of certain constituents of the cerebro-spinal fluid by the organisms as dietary, thus altering its tension and preventing its normal permeation through the membranes of the Pacchionian bodies into the venous blood-

stream, and thus a stasis of the fluid is set up. This stasis results in a compression of the arterial blood supply, and the resulting anæmia increases the intra-cranial pressure. The author has shown that arterial cerebral anæmia produced by ligation of the internal carotids will, in dogs, in a few minutes produce a marked increase of intra-cranial tension, shown by the production of a hernia cerebri through a trephine opening and by the increased flow of fluid from a spinal puncture.

When the intra-cranial tension reaches a degree just above that of the arterial blood-supply the "fight for existence" of the vital centres begins. At first, owing to the activity of the vaso-motor centre, the blood-pressure is raised to a sufficient level to maintain the supply to the respiratory centre, but later the former centre takes on a rhythmic activity, resulting in Traube-Hering waves in the blood-pressure and in periods of respiratory activity and apnœa (Cheyne-Stokes), according to whether the respiratory centre has a sufficient blood-supply or not. The author has been able to confirm the experiments of Kocher and Cushing, and to observe a similar series of events in an artificially induced acute meningitis produced in a dog by cranial injections of a mixed culture of a streptococcus and the hay bacillus. Meanwhile, due to the same factors, an acidosis of the tissues results, and this acidosis, in accordance with the views of Fischer, tends to increase the œdema. The author, in the examination of thirty-seven cases, found that in all acute inflammatory conditions of the meninges the cerebro-spinal fluid showed a varying degree of combined acidity, while in cases with no meningitis the fluid was either alkaline or amphoteric. The metabolism of the tissues involved is interfered with, so that their chief constituent, lecithin, undergoes degeneration, and the poison groups, characterised by cholin, accumulate in the spinal fluid, and add a direct nerve poison to the bacterial toxins. Cholin was found in excess in all cases of acute meningitis examined by the author. The symptoms, therefore, may be grouped into—(1) those dependent on increased intra-cranial pressure, and (2) those dependent on toxins due to the action of the organisms and to the decomposition products of the tissues. Any procedure which places the control of intra-cranial pressure within the grasp of the surgeon is the logical surgical remedy, and the operation devised by Haynes is the simplest and most easily performed to secure this end.

A. J. Wright.

Frey, Hugo.—On the Mechanism of the Auditory Ossicular Chain.

"Verhand. der Deutsch. Otol. Gesell.," May 13 and 14, 1910.

Several arguments are advanced in support of the author's view that there is for all practical purposes no reciprocal movement between the malleus and incus in the conduction of sound. The locked joint capable of allowing some reciprocal movement, which Helmholtz has described as existing between the two bones, is only capable of allowing such movement when the axis of rotation runs below the joint. A diagram will readily demonstrate that in this case both bodies must move in unison both outwards and inwards. A play of action between the two ossicles is not, as has been suggested, necessary to protect the inner ear in case there is a sudden rise of intra-tympanic pressure. In this case the internal pressure on the stapes tends, in part at least, to neutralise the pressure outwards on the other tympanic structures. Excessive outward displacement of the ossicular chain is further prevented by the tendon of the tensor tympani and the ossicular ligaments. The experimental evidence of Helmholtz's view was acquired from specimens the anatomical

integrity of which was not afterwards confirmed. Further, the source of sound used and the manner in which it was conducted were such that they would rather tend to injure the delicate unankylosed joint than to induce it to act in a physiological manner. In further support of his theory the author has examined the anatomical relations of the hammer-ambos joint in suckers, and finds that, as in most species of animals, there is a bony or fibro-cartilaginous ankylosis between the two ossicles; in some species he found a rudimentary joint, which, however, was not associated with any increase of auditory acuteness. He is of opinion that fixation of the joint is more conducive to good hearing than otherwise.

J. B. Horgan.

REVIEW.

Diseases of the Throat, Nose and Ear. By W. G. PORTER, M.B., B.Sc., F.R.C.S.Ed. Bristol: John Wright & Sons, Ltd., 1912. Pp. xii + 275. With 77 illustrations, 44 of which are in colours.

In writing this book, the author's main object has been to provide the practitioner and senior student with a single volume of moderate size embracing sufficient information on the diseases of the regions with which it deals to be of value in practice. It may be said at once that the author has signally succeeded in his task, and has produced a work which contains a large amount of well-digested and accurate information packed in a surprisingly small compass. With the object noted above, he has given special attention to diagnosis and to treatment in so far as the latter can be carried out by the non-specialist, but he has given no descriptions of major operations, contenting himself with their indications and general features.

The book is divided into four sections, dealing with Diseases of the Pharynx, the Larynx, the Nose, and the Ear, and one cannot but admire the variety of the information given and its soundness. Moreover the work is thoroughly up-to-date, the style is good, and the general get-up of the production is all that can be desired. The coloured plates are unusually numerous and well executed. Altogether the work is eminently suited to the purpose for which it is designed

Maclod Yearsley.

NATIONAL BUREAU FOR PROMOTING THE GENERAL WELFARE OF THE DEAF.

The next lecture by Dr. J. Kerr Love will deal with "Sporadic Congenital or Infantile Deafness. Syphilitic Deafness," and will be delivered at the Royal Sanitary Institute on Thursday, December 5, at 6 p.m.

BOOKS RECEIVED.

- Traité de Laryngoscopie et de Laryngologie, opératoire et clinique.**
Par le *Th. Heryng*. Traduction française par le *Dr. Chas. Siems*.
Paris: Masson & Cie, 1912.
- Forschungen und Erfahrungen 1880-1910. Eine Sammlung Ausgewählter Arbeiten.** Von *Prof. Dr. Sir Felix Semon*. Zwei Bände, mit 2 Tafeln und zahlreichen Textfiguren. Berlin: August Hirschwald, N.W. Unter den Linden 68, 1912.