

coming back to thecal drainage as being the most hopeful way of treating cases. This matter was discussed in our Section at the International Congress of Medicine, and the further I attempt to treat cases of meningitis, the more convinced I am that the real secret, as was stated on that occasion, is that the choroid plexus blocks out the antibody. There are practically no antibodies in the cerebro-spinal fluid, and until you can get a high antibacterial content in the cerebro-spinal fluid, either by introducing it mechanically, or as an antiserum, or by altering the permeability of the plexus, the great bulk of the cases of meningitis will be lost.

MR. SOMERVILLE HASTINGS: The only cases of meningitis in which I have experienced recovery have been those treated by repeated lumbar puncture. I should like to hear from Mr. Scott whether, with a normal labyrinth, he considers it justifiable to do translabyrinthine drainage. I should also like to know something of the method Mr. West employs for continuous thecal drainage, because I have never done it, and I would like to try it.

MR. C. E. WEST (replying to Mr. Somerville Hastings): The method of continuous thecal drainage is exceedingly simple. It consists of the introduction of a suitable trochar cannula into the theca in the ordinary position of lumbar puncture. It gives the most extravagantly profuse drainage. The end of the trochar comes out in the centre of a large rubber sheet, and over that are placed sterile sponges or swabs. Periodically the sheet is opened out and the sponges replaced.

MR. SYDNEY SCOTT (in reply): In answer to Mr. Somerville Hastings, as mentioned in the note at the end of my case, it seems to me that the chief indication for draining the basal meninges through the labyrinth occurs when the meningitis is preceded by labyrinthitis, as is so frequently the case in otitic meningitis. When the patient is *in extremis* when first seen, I think it the right procedure whether one knows the labyrinth to be affected or not.

Abstracts.

BRONCHOSCOPY.

The Technique of Suspension in Bronchoscopy and Œsophagospy.—R. C. Lynch (New Orleans, La.). "The Laryngoscope," July, 1917, p. 533.

In children and infants Lynch has made use of his own suspension method and apparatus for introducing and manipulating bronchoscopic and œsophogopic tubes. Infants and young children are the most ideal subjects for suspension because of their muscular undevelopment, their flexible necks, and the short distance from the upper teeth to the larynx. It is in infants and young children that the greatest number of our foreign body cases occur, and it is in these also that we most fear reactive inflammation and swelling due to our manipulations. It is not uncommon for the surgeon to remove the foreign bodies successfully with the bronchoscope only to be called again to relieve the subglottic œdema by a tracheotomy. Peroral endoscopy is the procedure of election in infants and young children provided one has developed a technique which will

permit the passing of the tube through the glottis with the least amount of traumatism. Suspension aids this to the greatest degree. Lynch agrees with Jackson in his postulate: no anæsthesia in young children and never in infants. For bronchoscopy in infants and young children the head of the table is not dropped. Just sufficient extension by moving the horizontal crane outwards is made to bring the posterior two-thirds of the larynx into view; then the neck is straightened by the elevation of the travelling crane, and we have the posterior two-thirds of the larynx well in view, in many instances with the child's head hardly elevated from the table. The child is prepared by being wrapped firmly in a sheet, and the crane so adjusted that we may procure flexion of the head rather than extension. We do not want to see the anterior commissure. We only desire to gain sufficient room for the passage of the tube. Lynch prefers to introduce the suspension spatula so that it picks up the laryngeal face of the epiglottis and brings into view the interior of the larynx. Five per cent. cocaine is now applied to the upper part of the larynx only. The surface of the larynx and vocal cords are next covered with sterile vaseline to permit the easy passage of the tube. It is now an easy matter to slip the bronchoscope or œsophoscope into their respective openings without injuring the parts. Lynch preferred the Killian baby set of bronchoscopic tubes, because they are equipped with a hollow, smooth mandarin which causes no injury. Further, these tubes give the largest working lumen. The tube should be well greased, and the cords separated by a retractor. In this way the tube can be passed into the trachea without coming into contact with the subglottic space. Once the tube has passed the vocal cords the mandarin is removed. If it is probable that the tube will have to be removed and reintroduced, as in the case of multiple bodies, it is best to continue the patient in suspension.

If, on the other hand, one prefers to use the tube unaided after its passage through the cords, the hook of the suspension apparatus is removed from the crane and carefully tilted to the right to permit the removal of the left tooth plate; then the right tooth plate is removed in the same manner. The pear-shaped ring of Lynch's apparatus is now bent back upon its hinge, and the screw holding the spatula is loosened. In this way the body of the hook is disengaged from the spatula so that the latter can be finally removed. (It must be noted that Lynch's article applies only to his own apparatus for suspension, and that his technique is not suitable for the suspension laryngoscopy apparatus of Killian—the one usually employed in this country. In many ways Lynch's apparatus, as shown in his illustration, appears to be a great improvement on Killian's. It certainly appears to allow much more working space, and thus facilitates the passage through it of bronchoscopic or œsophogopic tubes.—Abstractor.)

J. S. Fraser.

EAR.

Primary Carcinoma of the Middle Ear. "Laryngoscope," July, 1917, p 543.

Newhart states that primary carcinoma of the middle ear is very rare. Cancer of the external meatus is much less rare, while malignant disease of the auricle is comparatively common. Up to 1910 less than 50 authenticated cases of middle-ear cancer had been recorded. Dupau

estimates that there is only 1 case of malignant disease of the middle ear in every 10,000 cases of otorrhœa. Newhart has received 247 replies from otologists in America on this subject; 192 had never had a case, while the remaining 45 returned a total of 51 cases. The disease occurs most frequently after the age of forty, but 4 cases are reported under twenty-one years. Chronic purulent otitis media was present in over 85 per cent., and many gave a history of suppuration dating from infancy or early childhood. Of all *symptoms*, the most constant and usually the earliest is pain referred to the meatus or the post-auricular region. Next in frequency is the presence of bleeding granulations in the middle ear or meatus. Facial paralysis occurs relatively early in most cases. Mastoid tenderness and swelling, with a superficial ulceration, appear in the advanced stages. The degree of deafness depends on the involvement of the cochlea. Vestibular symptoms are frequently very late. Cachexia is common, and is explained by disturbances due to the pain and the poison produced by the growth itself. Practically all the cases were squamous epitheliomata, but one notable exception, described by Lange, proved to be a cylindrical-celled cancer. Invasion of the bone takes place from the tympanum, and destruction goes on rapidly with the formation of irregular sequestra. The *labyrinth capsule is very resistant to the new growth*, and the dura also presents a decided barrier to its extension to the brain. Neighbouring lymph-glands are often enlarged, but microscopically show only an inflammatory reaction, and almost never reveal the presence of carcinoma. With the advance of the growth the parotid gland and lower jaw joint are invaded. The lateral sinus is not infrequently obliterated, and in advanced cases the meninges, brain, and cranial nerves are attacked. Metastases are very unusual.

Prognosis.—Carcinoma of the middle ear runs a rather rapid course. The interval from the first symptom to the time of death varies from eight to eighteen months, with one year as the average duration. Death is caused by meningitis, brain abscess, hæmorrhage, or exhaustion, or by the direct extension of the growth to the vital centres. An early *diagnosis* can only be made with the microscope. Newhart recommends that aural polypi, especially in persons over forty years of age, should be microscopically examined. The only effective *treatment* consists in thorough operation, though some writers advise against all interference. Operation at least results in relief of pain, even if the relief be only temporary. Newhart has been unable to find any positively successful result from the use of radium or the X-rays. His own case was that of a female, aged sixty-five, who complained of severe pain in the right ear, with foul discharge and occasional bleeding of five months' duration. The trouble began with an attack of influenza. The conversation voice could be heard at 10 ft., with the noise apparatus in the healthy ear. (The patient suffered from arterio-sclerosis and chronic nephritis.) Just before operation facial paralysis was observed. X-ray examination revealed extensive destruction of the bone. On cutting through the periosteum the knife plunged deeply into the mastoid, which was filled with very vascular granulations, interspersed with small sequestra. As the dura was found to be involved, no attempt was made to extirpate the growth. As a result of operation, the pain disappeared and also the facial paresis. The wound healed rapidly. Owing to recurrence of pain, a second operation was performed ten weeks after the first, and again there was some relief from pain. Later there was a severe spontaneous hæmorrhage from the ear, checked by packing. Morphine soon became

necessary. Death occurred eight months after the onset of the first symptom. The *post-mortem* showed that the maxilla and the parotid gland were involved.

J. S. Fraser.

Wounds of External Auditory Meatus.—J. Rozier. “Rev. de Laryng., d’Otol., et de Rhinol.,” August 31, 1917.

This monograph (a continuation of the paper in the August 15 number) deals with traumatic stenoses. Of fifty cases in Prof. Moure’s clinic, seven are described in detail. To these a case of *congenital* bony atresia, to indicate that, whether traumatic or congenital, the condition presents similar problems. The stenoses were of the mixed annular and tubular types; in two cases they involved the bony as well as the cartilaginous meatus, the other five being simply cartilaginous.

To enlarge the bony canal, cutting operations were limited, as would be expected, to the posterior and superior walls. As regards the concha and cartilaginous meatus, these were enlarged by flap operations as in a radical mastoid.

In three of the seven patients there was a recurrence. A study of the case-histories suggests to the reader no reason for these recurrences, nor does the author throw any light on this question, except that in all these three cases the anterior meatal wall had been injured.

None of the cases had as yet been observed for more than seven months since operation, and in view of the obstinacy of such stenoses, this period might be considered insufficient to justify a claim of permanent cure.

All will endorse the author’s belief in the paramount importance of post-operative treatment to prevent recurrence.

H. Lawson Whale.

Notes on War Injuries of the Ear.—R. E. Shuter. “Medical Journal of Australia,” September 29, 1917.

Shuter, as consulting-surgeon to the Australian Imperial Force, made a fairly complete examination of more than 300 cases of war injuries of the ear. He gave, in addition, a considerable number of cases in which the examination was not complete enough to base upon it authoritative conclusions.

Whatever may be our opinions regarding his theory of the nature of concussion deafness, which he elaborates later in his thesis, we will all agree with what he says of certain ear conditions, which render a man unfit for active service. He says, “experience has shown that it is an economic mistake to pass men for active service, who suffer from discharging ears, or destruction of the drum membrane. Under the stress of camp and trench life even cases that have been long quiescent become active. The man is useless as a soldier, and becomes an encumbrance on the Medical Department, and occupies beds more urgently required.

The internal ear may be injured by direct traumatism, or by concussion. Concussion deafness is not due to the impact of sound waves, but it is due to dynamic waves. The bursting of a high explosive causes a sudden violent blast of wind especially in a confined space. The unilateral nature of concussion deafness excludes a central cause. Shuter “strongly suspects” that the middle ear, by which he means the sound-conducting apparatus of the ear, embracing the perilymph and endolymph of the internal ear, is the part wholly affected in

concussion deafness. Whatever value we may place on his theories, the direct observations of the writer are of value at the present time, and those interested will desire to read the paper *in extenso*.

A. J. Brady.

MISCELLANEOUS.

The Treatment of Bronchial Asthma by Vaccination, with Report of Cases.—M. H. Licard (New York). "Amer. Journ. Med. Sci.," July, 1917.

Although asthma is undoubtedly in some cases an expression of anaphylaxis, a large number are obviously due to an infecting agent, and in these it is associated with bronchitis, and often runs an acute course with pyrexia, cough, and expectoration. The bacteria present are usually the *Streptococcus viridans* or *Streptococcus hæmolyticus*. Of the 16 cases treated by the author with autogenous vaccines, 12 were cured, 3 were improved, and 1, in which tuberculosis was also present, unimproved. Twelve cases required nine to sixteen injections, extending over a period of from four to eleven weeks. Two cases were given treatment for fifteen and seventeen weeks respectively.

Thomas Guthrie.

NOTES AND QUERIES.

On Thursday, June 20, at the College of Ambulance, No. 3, Vere Street, Mr. Herbert Tilley gave a lecture on "First Aid in Diseases and Injuries of the Ear, Throat and Nose." The meeting was presided over by Sir Thomas Barlow, Bt. The lecture was illustrated by diagrams, models, stereograms, and lantern-slides. Only the general principles underlying the treatment of injuries, accidents, and diseases in these regions were dealt with, and emphasis was laid on the significance of earache, especially in children, the dangers of a chronic discharge from the ear, and the clinical significance of sore throat with pyrexia in children from the point of view of the infectious disorders of childhood. The audience was much interested in the demonstration of direct vision instruments and in the lecturer's collection of foreign bodies which is not unknown to our Section.

Some idea of the success of Mr. Tilley's lecture may be gathered from the fact that he was asked to repeat it, and on Thursday evening, July 28, he was welcomed by an equally enthusiastic audience.

BOOK RECEIVED.

Transactions of the Thirty-ninth Annual Meeting of the American Laryngological Association, 1917. (From Dr. Harmon Smith, Hon. Secretary.)