doubtful; and published two of his own. Two other cases were published by Schmiegelow in 1893.

Of the two cases now published by Stankowski, the first occurred in a man twenty-nine years old suffering from phthisis pulmonum et laryngis. When first seen, November 11th, 1896, the true and false cords were reddened and moderately infiltrated; in the plica interarytænoidea was an irregular infiltration, most marked on the right side; the right arytenoid cartilage and aryepiglottic fold were swollen. Treatment: daily insufflation of iodol. November 14th, 1896, ordered by Prof. Erb to take 1 g. pot. iod. twice daily; on 18th this was increased to 1 g. thrice daily. November 19th, 1896, considerable œdematous swelling of the whole left arytenoid, specially marked posteriorly and laterally, and extending into the sinus pyriformis. Owing to some mistake the iodide was continued on 19th and 20th, the condition remaining unchanged. The iodide was then stopped; by the 22nd the œdema was slighter, and by the 26th had completely disappeared.

The second case occurred in a syphilitic man aged thirty-one, who when first seen had been taking considerable quantities of K. I. for a fortnight, viz.:—

Pot. iod.	5·0
Aq. lauroc.	1·0
Aq. dest. com.	100·0

Two tablespoonfuls at nine and at ten o'clock every morning. He had also been using an iodine ointment at the same time.

Slight respiratory distress gradually came on. On December 31st, 1896, there was found in the larynx diffuse moderate redness. In the region of the right arytenoid, especially on its posterior and lateral aspects, and extending thence into the sinus pyriformis, the mucous membrane was swollen, opaque, translucent, and of a pale red colour. The iodide was stopped. On January 2nd, 1897, the œdema was decidedly less, and by January 1st, 1897, had quite disappeared.

In both cases the œdema was unilateral and circumscript; in both cases the iodide had been taken for some days before the œdema commenced. In neither case were the symptoms acute or alarming. *Arthur J. Hutchison.*

EAR.

Alderton, H. A.—*Toxic Paralysis of the Chorda Tympani Nerve in Middle-Ear Operations from the Use of a Strong Cocaine Solution.* "Ann. Otol.," etc., Feb., 1897.

The patient was deaf with evidence of good nerve conduction, but with a depressed adherent cicatrix over the inco-stapedial joint. The cicatrix was divided, also the stapedius tendon, and the joint disarticulated. The chorda never came into view, and yet a complete temporary paralysis occurred which lasted about twenty-four hours. *R. Lake.*

Barr, Thos.—*A Case of Chronic Purulent Inflammation of Both Middle Ears, proving Fatal by Extension on the Left Side through the Labyrinth and Auditory and Facial Nerves to the Interior of the Cranium.* "Glasgow Med. Journ.," April, 1897.

The patient, first seen in 1894, was a lad aged seventeen, with bilateral fœtid otorrhœa of seven years' duration. His father and one sister had both had unilateral otorrhœa for many years, and the sister had died of "inflammation of the brain." When first seen there was perforation of the membrane of Shrapnell on both sides, through which came profuse purulent fœtid discharge. After treatment

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with attic syringe, etc., had been carried out for some time, operation was proposed, but refused. The boy then went home, and returned two years later. At that time the discharge still continued; the left ear, which was plugged by a large polypus, was totally deaf; the right heard a watch at $\frac{10}{70}$. There was also occasional buzzing and slight giddiness. The polypus was removed, and a carious condition of the posterior wall of the meatus discovered. A few days later the attic and antrum were opened into; cario-necrotic *débris*, granulations, and cholesteatoma cleared out. The pain and other symptoms then disappeared, and in a few weeks patient was up and out. Slight headache, both frontal and occipital, now came on, with temperature of 100, then suddenly sickness, vomiting, delirious excitement, and a temperature of 102. Dr. Jas. H. Nicoll was then called in. He exposed the greater part of the sigmoid sinus and the dura mater lining the floor of the middle fossa, but in neither position did he find pus or any other sign of disease. Further operation was postponed; the boy began to improve, and the temperature became normal. About a week later there suddenly came on delirium, unconsciousness, extremely rapid pulse, temperature 104°-106° F., and, after about eight hours, death.

P.M.—I. *Temporal Bone.*—The most interesting features were: (1) A large cavity, lined by a soft membrane, in the petrous portion and continuous with the antrum. This was the result of necrotic destruction of the whole labyrinth. The only trace of labyrinth left was a small loose sequestrum consisting of a portion of the cochlea. (2) In the roof of this cavity was a carious opening into the middle cranial fossa, covered by healthy dura mater. (3) The cribriform lamina had been eroded away, the auditory nerve presenting here an abrupt and ragged ending. (4) The stem of the nerve was swollen and thickened. (5) The facial shared in this thickening in the internal meatus, lay directly under the dura at the geniculate ganglion, and was destroyed at the posterior part of the inner wall of the tympanum.

II. *Interior of Cranium.*—Fibrinous exudation was found in the pia-arachnoid over the convexity, at the base, specially marked on left side of pons and medulla, and slightly on posterior aspect of cerebellum. That part of the cerebellum which lies on the pars petrosa was superficially ulcerated, and fœtid pus penetrated deeply into the cerebellar tissue. There was a considerable quantity of clear fluid in the lateral and fourth ventricles. The dura, even where it covered the carious aperture above referred to, seemed healthy.

Arthur J. Hutchison.

Crockett, E. A. (Boston).—*An Acute Syphilitic Affection of the Ear.* "Boston Med. and Surg. Journ.," Feb. 11, 1897.

In this paper the author points out that syphilitic affections of the ear are far more common than is generally supposed, and that they present a marked similarity in their symptoms—namely, very sudden and severe deafness, more or less severe vertigo, and violent tinnitus. He also draws attention to the fact that, whilst the watch and voice deafness is very marked, and a tuning-fork of the middle register is wholly lost to bone conduction, it remained fair for air conduction; and whilst the upper register, as shown by the Galton whistle, was more or less diminished, the lower register remained unaltered. The author is of opinion that pilocarpin may be given with advantage in these cases combined with antisyphilitic treatment.

StGeorge Reid.

Friedewald, H.—*On Osteomata of the Auditory Canal, with Report of Successful Removal of a Large Exostosis by Schwartze's Operation.* "Ann. Otol.," etc., Feb., 1897.

The patient was a woman of sixty-six years, who had never had otorrhœa. There was a hard, whitish tumour occluding the auditory canal; its external surface

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was about a quarter of an inch from the orifice. When seen a month later granulations had sprung up at its free border, and there was reason to suspect retention of pus. The auricle and cartilaginous tube were then reflected forward, and the osseous tumour found occluding the entrance of the bony canal. It was removed easily and the ear replaced. Hearing was restored in a marked degree, and there was no contraction of the canal. *R. Lake.*

Laurens, G.—*Relation between Aural and Ocular Diseases.* "Thèse de Paris," 1897.

IN an interesting dissertation Laurens reviews the anatomical and physiological relations between the ear and the eye, and studies the pathological consequences of these relations. The ocular disorders noted in the course of aural diseases are numerous—myosis, iritis, blephero-spasm, and paralysis. The more frequent are the nystagmus and optic neuritis. These disorders appear after various lesions of the ear, but specially in suppurative otitis, when it is complicated by mastoiditis, cerebral abscess, or thrombose of sinus. They are the consequence of direct propagation of septic inflammation through the brain or meninges, or of reflex troubles, or secondary infection by vessels or lymphatics. The author indicates the great interest of these disorders for the diagnosis and indication of operative interference. A complete bibliography is appended. *A. Cartaz.*

Leutert, E.—*On the Value of Lumbar Puncture in the Diagnosis of Intracranial Complications of Otitis.* "Münchener Med. Woch.," Feb. 23 and March 2, 1897.

AFTER a short historical outline of the work done in connection with lumbar puncture since its introduction to the profession by Quincke in 1891, the author quotes eleven cases in which he has used it for diagnostic purposes in the ear clinic in Halle, and then discusses the value of the method.

In the first place he notes that, as was to be expected from the results obtained by previous workers, as a therapeutic agent lumbar puncture is valueless; further, that in advanced cases of brain tumour, or even meningitis, it may be dangerous. One patient died fifteen minutes after the puncture had been made. In this case, which was the author's first, the man was extremely ill, and aspiration was used.

Almost all previous writers considered the method valuable only when a positive result was obtained. Leutert, on the other hand, holds that a negative result is still more valuable.

If on making the puncture only a small quantity of cerebro-spinal fluid comes away, no conclusion at all can be drawn as to the intracranial condition, because all the fluid may have come from the spine, and there are quite a large number of causes that may have shut off the cerebral fluid. But if a larger quantity of fluid than could be of spinal origin comes away, it must be cerebral. If this contains products of inflammation, leucocytes (specially polynuclear leucocytes), broken-down leucocytes, or bacteria, diagnosis of purulent meningitis may at once be made; on the other hand, if the fluid is clear and contains none of these inflammatory products, purulent meningitis may be as certainly excluded.

From another prolonged research the author has been led to the conclusion that the only complications of otitis that produce continuous high fever are meningitis and sinus thrombosis, or permeability of the sinus wall for bacteria or their toxins; cerebral abscess may sometimes produce a similar condition, but not for long. Therefore, given a case of otitis with continued high fever, let lumbar puncture be performed; if the results are negative, sinus thrombosis may be diagnosed right off. Further, it seems very probable that in all cases of sinus thrombosis there is an increase in the quantity of cerebral fluid; this, however, is not certainly established yet.

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In the differential diagnosis between cerebral abscess and sinus thrombosis, lumbar puncture is of no direct assistance; but where both are present it may indirectly assist by leading the surgeon to operate on the thrombosis at an early date, and so giving the abscess a chance of showing its own proper symptoms. In the diagnosis between abscess and tumour it is of no use at all.

With regard to the exclusion of meningitis a very important point is that the clear condition of the fluid, which excludes a purulent meningitis, does not exclude a tubercular meningitis; sometimes, but not always, tubercle bacilli can be found in the latter. This is not regarded by the author as seriously impairing the value of the procedure, as the two classes of cases are not at all likely to be confused clinically.

Bacteriological examination of the fluid has so far proved very unsatisfactory. Bacteria were sometimes found, could seldom be cultivated, and never produced any reaction when injected into animals. The probable causes of this peculiarity are discussed. *Arthur J. Hutchison.*

Somers, **Lewis** (Philadelphia). — *Traumatic Perforation of the Membrana Tympani.* "Philadelphia Polyclinic," March 6, 1897.

Report of a case where the membrane was perforated intentionally by the patient in order to relieve his deafness, a splinter of bone being used for the purpose. Owing to the force used, however, the chain of ossicles were jammed together, leading to impaction of the stapes, and giving rise to intense pain and total deafness, there being also considerable congestion of Shrapnell's membrane set up. On examination the perforation was seen to be situated in the posterior inferior quadrant. By the use of Siegel's speculum the ossicular chain was relieved from the increased pressure, with the result of the disappearance of the pain and increase in the hearing distance. The perforation rapidly closed with a firm cicatrix.

St George Reid.

REVIEWS.

Dalby.—*Short Contributions to Aural Surgery.* By Sir W. B. Dalby, F.R.C.S., M.B. (Cantab.). (London: J. & A. Churchill. 1896.)

In the present edition—the third—of Sir W. Dalby's well-known "Short Contributions to Aural Surgery," five additional papers have been added dealing with (1) the functions of the membrana tympani, illustrated by disease; (2) bubble remedies in aural surgery; (3) cancer of the ear; (4) hysterical (so-called) and functional deafness; (5) a note upon adenoid growths.

The author's object in his paper upon the functions of the membrana tympani, illustrated by disease, is to prove (1) that structural changes in the tympanic membrane of a very extensive nature may exist without impaired hearing, and (2) that loss of continuity in the tympanic membrane does not necessarily interfere with its function, provided that the ligamentous support which it affords to the chain of ossicles is not impaired. These two propositions are, of course, well known to, and admitted by, aural surgeons; but to many the fact that a perforation of the membrane may exist and be compatible with perfect, or almost

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