from eating. Very few cases recover. General treatment should be given, such as ol. morrhuæ, creosote, hyperphosphites, etc. Locally a spray of trichloride of iodine gives satisfactory results until ulceration occurs. When ulceration is present, guaiacol, fifteen per cent. to fifty per cent. in olive oil sprayed into larynx, gives best results. Used fifteen minutes before eating it produces local anæsthesia, so patient can eat with comfort. It also has a beneficial result on the ulceration, so cicatrization may occur in a few weeks, even when lactic acid and other applications fail. *Oscar Dodd.*

EAR.

Brieger, O. (Breslau).—*On General Pyæmic Infection following Aural Suppuration.* "Arch. of Otol.," Vol. XXV., No. 4.

THE author points out that pyæmia may result from aural suppuration without the intervention of sinus phlebitis, and even without evidence of osteo-phlebitis, simply from suppuration occurring in the mucosa of the tympanum. This may take the form of a *dermato-myositis*, with a peculiar jelly-like œdema of the affected muscle and an œdematous and almost erysipelatous condition of the skin over it, but without any tendency to suppuration. In ordinary pyæmia suppurative metastases in the muscles are not uncommon. Osteo-phlebitis in the temporal bone may give rise to pyæmia by extension to the lateral sinus, but also without it.

The difficulties in the diagnosis of thrombo-phlebitis of the lateral sinus are discussed. The temperature curve is frequently modified by co-existing conditions, though when typical it is diagnostic of pyæmia. The writer protests against founding a diagnosis of pyæmia on a single rigor, which may occur in middle ear suppuration without pyæmia. It is sometimes difficult to make the diagnosis from typhoid fever, tuberculosis, or malaria. The inconclusive value of ophthalmoscopic signs, Griesinger's cervical and occipital œdemas is insisted on. Inspection of the exposed sinus is only conclusive if it reveals gangrenous spots on the sinus wall, or fistulæ passing through them. Palpation is equally useless. Pulsation is no criterion of absence of thrombosis. Examination of the contents is recommended as practised either by exploratory puncture or incision, the former in the first instance, and the latter if the former gives no positive result—the presence of pus—it being noted that the aspiration of fluid blood from the sinus does not exclude the presence of thrombus. The chiselling open of the mastoid is the first therapeutic step, and evacuation of extra-dural pus the next, the latter sometimes leading to cure of thrombo-phlebitic pyæmia by stopping the formation of fresh excitants.

When thrombosis has been demonstrated, the sinus should be widely opened and evacuated. "If complete disintegration of the thrombus exists, with firm "central [heartwards] occlusion, and that portion which is opened is filled "with pus and thrombus masses, the evacuation of the pus by incision may lead "to a cure without anything further." As regards the ligature of the jugular vein, the author has arrived at the following conclusions: "The systematic application "of ligation as an integral part of the operative therapy of sinus phlebitis is not "justified. It is an error in pyæmia without sinus phlebitis. A proviso for its applica-"tion is the positive demonstration of sinus thrombosis by examination of the "contents of the sinus. In the presence of a solid occlusion in the direction of the "jugular vein, if evidence is wanting for the assumption of the extension of the "thrombosis into the vein, ligature is superfluous, and, under certain circumstances,

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"injurious. In addition, dependence on the general condition after the sinus has "been opened, as a guide for ligation of the jugular, as Jansen proposes, is "questionable." The principal point is the local condition in the vein, or at least at the cardiac end of the thrombus. No definite directions can be given as to the time at which operation is justified, or how long it can be postponed. Purulent lepto-meningitis is the one contra-indication. Pulmonary metastases do not contra-indicate.

Thrombosis of the cavernous sinus is most commonly the result of extension from the lateral through the superior petrosal sinus, but it may arise without this, as, for instance, from conveyance of suppuration along the carotid canal (Koerner). The local symptoms produced are exophthalmos, paralysis of the occular muscles, immobility of the globe, œdema of the lids, and chemosis of the conjunctiva, with or without hæmorrhages. In cases in which the clinical signs have been complete, and in which a *post-mortem* examination, after operative opening of the lateral sinus, revealed absence of thrombus in the cavernous sinus, Dr. Brieger points out the probability that the mere opening of the lateral sinus may bring about a loosening and aspiration of the clot in the cavernous one. He suggests this as a possible step in the operative treatment of cavernous sinus thrombosis, from whatever cause arising. *Dundas Grant.*

Grant, Dundas.—*Deafness arising from the Residua of Suppurative Inflammation of the Middle Ear.* "Clin. Journ.," Dec. 23, 1896.

THESE residua are: (1) perforations; (2) cicatricial formations; (3) inflammation and destruction of the structure of the labyrinth; (4) stenosis of the external meatus; (5) granulations; (6) desquamation products. The treatment of these conditions resolves itself into two elements: first, to liberate the stapes; secondly, to supply a substitute for the tympanic apparatus. To liberate the stapes: (1) restore ventilation of the tympanum; (2) remove all accumulations in the sacculated cavities by means of intratympanic syringe; (3) remove granulations; (4) divide any cicatricial bands which are accessible; (5) if ossicles are fixed, liberate the stapes by dividing the joint between it and incus; or (6) make complete excision of larger ossicles if hearing power very bad and exit of discharges is impeded. To supply a suitable conducting apparatus, take a small wisp of long-fibred non-absorbent wool of about three-quarters of an inch in length, trim the extremities, and tie a thread round the middle of the wisp. Then spread the fibres out in a radiating manner, so as to make a round pellet, and turn in the peripheral extremities, so that a somewhat springy cushion is formed, about the size of a pearl shirt-button. After dipping this in paroleine, carry it down to the tympanic membrane, and press it against the head of the stapes. This form is most useful where the head of the stapes is exposed. Where the perforation is in the postero-inferior quadrant, it is better to twist up a long, thin, pellet of wool, moisten it, and introduce it into the perforation, so as to bulge upwards, and approach or touch the stapes. Thin free cicatrices over the stapes are best treated by painting over with contractile collodion, the brush being drawn on to the adjacent wall of the meatus. The prognosis of the above class of cases is extremely favourable compared with that of non-suppurative sclerotic inflammation. *Middlemass Hunt.*

Hopkinson, B. Mervill.—*Acute Otitis Media.* "Journ. Am. Med. Assoc.," Feb. 27, 1897.

HE gives experiences in treatment, and mentions particularly the immediate relief of pain produced by syringing the ear several times a day with a solution of bi-

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chloride of mercury (1—1000) as hot as can be borne. He also used the Politzer inflation, and pilocarpin (gr. ¼) twice a day, which produced free diaphoresis.

Oscar Dodd.

Lommel (Basel).—*Contribution to the Knowledge of the Pathological and Anatomical Changes in the Middle Ear and the Cuneiform Cavity in cases of Genuine Diphtheria. Report on Twenty-five Post-mortem Examinations.* "Zeits. für Ohrenheilk.," Band 29, Heft 4.

In twenty-seven of the cases (96 per cent.) pathological degeneration was found in the middle ear; in two cases catarrhal occlusion of the Eustachian tube; in five, otitis media exudativa; in thirteen, otitis media purulenta. In twenty-one cases the mucous membrane of the Eustachian tube was normal, so that the diphtheritic affection had not been propagated *per continuitatem*, but was a symptom of this infectious disease. In ten of the cases also the cuneiform cavity was examined. One of these was normal; in three cases catarrhal inflammation of the mucous membrane was present; in three cases the cavity had sanious and in three others purulent contents. *Michael.*

Redmer, Konrad (Danzig).—*On the Spontaneous Recovery of Cholesteatoma and Cholesteatoid Affections in the Temporal Bone.* "Arch. of Otol.," Oct., 1896.

Redmer draws attention to those cases of old-standing suppuration in the middle ear in which the bony partitions between the meatus and antrum, and between the meatus and attic, have been cleared away by gradual erosion or by exfoliation, leaving such a confluence of the meatus, tympanum, attic, and antrum as is seen after a well-performed Zaufal's (or Stacke's) operation, there being no retro-auricular opening. He advises that the course of this spontaneous cure should be adopted as the model for our operative procedures, and that we should avoid leaving an opening behind the auricle.

As regards the use of the term "cholesteatoma," he urges that it should be reserved for those cases to which Virchow applied it, namely, heterologous epidermic tumours, found, as elsewhere, in the temporal bone, quite independent of any suppurative condition. The common suppurative cholesteatomata of the aural surgeon should be designated "retention masses resembling cholesteatoma," or "hyperplastic epidermis," or "epithelial cysts," according to the genuine nature. He rejects Haug's idea of closing the Eustachian tube as likely to encourage rather than combat the desquamative process, holding that free ventilation is the condition most favourable to the drying of the epidermis.

Dundas Grant.

Ropke, F. (Solingen).—*A Case of Pyæmia after Acute Suppuration of the Ear; Operation; Recovery.* "Arch. of Otol.," Oct., 1896.

In spite of enlargement of the perforation the suppuration continued, and severe constitutional disturbance ensued. Tenderness was confined to the tip of the mastoid. There came on several rigors and extreme oscillations of temperature, and, after some delay, operation was permitted. A superficial cavity was found on chiselling, which extended back to the groove for the lateral sinus and down to the tip of the mastoid. The sinus was thrombosed, as shown by puncture, but its walls were normal. On the tenth day the patient was well enough to get up, and soon recovered. The infection was probably from the veins of the petrous bone—osteo-phlebitis—and not from the lateral sinus—sinus-phlebitis—as in the latter case the sinus wall would probably not have been healthy and the thrombus non-purulent. The pulse before the anæsthetic was 112, but during the narcosis it

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went down to 86-99. [This behaviour of the pulse is contrary to what Macewan considers typical of septic infections.—D.G.] *Dundas Grant.*

Stirling, J. W. (Montreal).—*Thrombosis of the Petrosal, Cavernous, and Circular Sinuses occurring in Scarlet Fever and due to Acute Suppurative Otitis Media.* "Canada Med. Rec.," Nov., 1896.

NOTES of a case where the left ear was affected, following scarlet fever, with rapid implication of the mastoid region. The mastoid was opened and some carious bone removed, but on the third day after the operation the left upper eyelid became intensely œdematous, followed on the following day by the right. The child died on the tenth day after the operation. The *post-mortem* examination showed thrombosis of the left superior petrosal sinus, and of the cavernous and circular sinus. *StGeorge Reid.*

Walker, H. Secker.—*A Case of Suppurative Otitis Media complicated with Cerebellar Abscess.* "Brit. Med. Journ.," March 6, 1897.

THE patient, a boy fourteen years of age, was seen by the reporter, with Mr. J. W. Hatton, on November 22nd, 1896. The boy had suffered with right-sided otorrhœa and polypus for some years. He had had pain in the left ear four months previous to the above date, which was followed by discharge. This pain had returned and was constant, and was spread over the head, but was chiefly localized in the occipital region. Five weeks earlier he had had attacks of shivering, and now looked pale and was rapidly wasting. He had vomited occasionally in the morning; constipation was marked, and there had been delirium at times.

On examination of the left ear a polypus was seen deep in the meatus, the discharge was offensive, and there was tenderness over the mastoid on deep pressure. The temperature had been between 99° and 100°, and the pulse rate from 110 to 130. There was no optic neuritis, no paralysis, and no ocular or facial spasm; the grasp was weak but equal; the knee jerk was increased on the left side and normal on the right. Cerebration was not delayed. There was no doubt about the mastoid disease, but the writer did not feel justified in diagnosing intracranial trouble.

Operation.—The mastoid was exposed by the ordinary incision; when, on reflecting the periosteum, the bone superjacent to the antrum was seen to be of a dirty grey colour. This was easily removed with a chisel, and the antrum found filled with yellowish, putty-like, and offensive material. The operation was carried out on Stacke's lines, the bony ridge between the antrum and ear not being removed below the junction of the middle and upper thirds of the meatus, in order to avoid the facial nerve.

The roof and posterior wall of the antrum were carious and perforated, and consequently removed, thereby exposing the dura mater lying against the temporo-sphenoidal and lateral cerebellar lobes. The dura, when exposed, was healthy.

For ten days the boy did well—headache and vomiting ceased, he was bright, and the temperature became sub-normal; the pulse averaged 112, and he was only troubled with constipation. On the eleventh day vomiting and headache recurred, but there was no optic neuritis. As these symptoms continued it was decided to explore the cerebellum, that being considered the probable site of the mischief.

The old operation wound into the posterior fossa was enlarged and the dura incised. The abscess cavity was entered at the second puncture, and about two and a half drachms of very offensive pus removed. A double drain was left in, and the wound dressed. Two days later (sixteen after the first operation) all the symptoms reappeared, and a little pus was found to have accumulated in the cavity. Three weeks later there were several attacks of vomiting, and the tube

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was removed as probably acting as an irritant, with a result that for two weeks more he did well, when suddenly all the old symptoms recurred with redoubled force, the boy rapidly becoming a mere skeleton.

The cerebellum was now opened a little further back, and pus found at once, the cavity was washed out, and two decalcified bone tubes left in. The boy now rapidly and completely recovered, but, oddly, developed now a transient optic neuritis.

The author alludes to the paper on cerebellar abscess by Ackland and Ballance (for abstract, *see* JOURNAL OF LARYNGOLOGY). [The occurrence of vomiting after opening of the cranial cavity, and also after incision of the dura, is especially noteworthy.—ED.] *R. Lake.*

Zwaardemaker, H. (Utrecht).—*Acoustic Railway Signals and Acuteness of Hearing.* "Arch. of Otol.," Oct., 1896.

THE writer points out that as railway drivers get older—and more experienced—their hearing power for the upper tones of the scale becomes defective. Hence the sound of a mouth or steam whistle, when forcibly blown so as to accentuate the over-tones, may not be heard. A signal horn tuned to *a d'orchestre* is more likely to be heard. As a minimum, employés on railway duty should have hearing for whispered speech at one mètre. When engaged they should have normal hearing, or nearly so. At intervals of from two to five years they should be retested with a continuous series of tones. *Dundas Grant.*

Obituary.

CORRADO CORRADI.

WE regret to have to announce the death of Dr. CORRADO CORRADI of Verona, at the early age of thirty-seven. He had only recently gained the position of Liber Docent in the University of Turin. He had been Secretary of the Società Italiana di Laringologia from its foundation, and was a most ardent student and investigator in our speciality; many of his contributions have been referred to or abstracted in our pages. His devotion to laryngology and otology, and the success which he had already obtained, although practising in one of the smaller Italian cities, are both shown by the fact that he has bequeathed some £1200 to his special department in the Civil Hospital of Verona. *StClair Thomson.*

NOTICES OF SOCIETY MEETINGS.

AMERICAN LARYNGOLOGICAL SOCIETY, May 4th, 5th, and 6th, at Washington, D.C.

AMERICAN OTOLOGICAL ASSOCIATION, May 4th, 5th, and 6th, at Washington, D.C.

WESTERN OPHTHALMOLOGICAL, OTOLOGICAL, LARYNGOLOGICAL, AND RHINOLOGICAL ASSOCIATION, April 8th and 9th, St. Louis, Missouri.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION, April 30th, London, England.

LONDON LARYNGOLOGICAL SOCIETY, April 14th, London, England.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS, May 4th, 5th, and 6th, at Washington, D.C.

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