and a list of the most suitable preparations appended. (1) The crude powder; (2) pastilles; (3) a saturated solution of orthoform in collodion; (4) a spirituous spray; (5) a ten per cent. ointment; (6) a ten per cent. aqueous solution of the hydrochloride.

In the author's opinion neither the free orthoform (basis powder) nor the hydrochloride anæsthetise sufficiently to allow of surgical action upon an unbroken surface. When, however, it is applied to painful ulcerating surfaces it appears to exercise an analgesic and anæsthetic influence. It also appears to be non-toxic.

A short report of cases treated with this drug is appended. *W. Milligan.*

ŒSOPHAGUS.

Bingham, G. A.—*Removal of Foreign Body from the Œsophagus.* "Canadian Med. Review," Dec., 1897.

FIVE days before examination a child had swallowed a button three-quarters of an inch across. Finding it impossible to remove it *per vias naturales*, an incision was made on the left side from the thyroid cartilage down to the sterno-clavicular joint. In dissecting, the inferior thyroid artery gave the most difficulty. The button was removed through the lower end of the wound. No sutures were inserted, but the wound lightly packed with iodoform gauze. Stomach tube passed now and then to prevent stricture. Good recovery. *Price Brown.*

EAR.

Anderson, H. B.—*Cerebral Abscess.* "Canadian Med. Review," Dec., 1897.

THE author had seen within a short time on the *post-mortem* table five cases of abscess of the brain, four of which resulted from ear disease. In some of these the only diagnosis was made at the *post-mortem*. The sequelæ observed were general septicæmia from streptococcus infection, abscess of the cerebellum, abscess of the temporo-sphenoidal lobe, thrombosis of the cavernous sinus, and extension into both orbits, with suppuration. *Price Brown.*

Colman, W. S.—*Further Remarks on "Colour-Hearing."* "Lancet," Jan. 1, 1898.

ATTENTION has been called by Mr. Francis Galton to the great variations in the exact manner in which mental processes are carried out in different individuals. In his fascinating book, "Enquiries into Human Faculty," he has given many illustrations of this individuality. One of the most remarkable of these is the faculty possessed by a considerable percentage of persons of experiencing a sensation of colour in association with certain sounds, the colour seen being definite and invariable for the same sound. This faculty had been observed by many earlier writers, and had been ascribed to morbid brain conditions. The writer's attention was called independently to these curious conditions, and he had the opportunity of investigating a number of cases, the result of which appeared in the article of March 31st and April 7th, 1894. It was found that the cases fall into two groups. In the first there is a crude colour sensation, often very beautiful, associated with certain sounds such as each of the vowel sounds, musical notes, or particular

musical instruments. The appearance is usually that of a transparent coloured film similar to a rainbow in front of the observer, but not obscuring objects. In the second group there are colour sensations whenever letters or written words (symbols of sound) were spoken or thought of, so that when a word is uttered the subject visualizes the letters, each having a distinctive tint. He has since that time been able to investigate a number of additional cases. Most of them were of the same character as those previously described, and need not therefore be again described. Others which illustrate fresh points will be described later.

A study of these additional cases entirely confirms the opinions previously expressed as to the nature of the phenomena—viz., that they are "associated sensations" analogous to the cutaneous sensation of shivering in certain parts of the body (varying in different individuals) which is experienced at the sight or thought of an accident or at the sound of the squeak of a slate-pencil. The subjects are more frequently males than females. The author met with about the same proportion among highly educated individuals, and those who have had an ordinary board school education. It is difficult to obtain any light as to the origin of the phenomena. They nearly always date back to the subjects' early childhood. It has been suggested that they have been due to the child learning his letters from a coloured alphabet, but this is certainly not so in some cases. In one case the letters in the alphabet used for teaching were all pink, and none of the colours excited by the pronunciation of words were pink. In another, all the members of one family (who possess this faculty) were taught from the same coloured alphabet, but their colour experiences had nothing in common. Even where the faculty is inherited, mother and daughter associate totally different colours with the same sound.

The tints excited are very definite and characteristic, each for its own sound. They do not vary as time goes on. In one of the cases the tints were exactly the same when recorded after an interval of ten years. The colours are scarcely ever the same in two individuals. This is very clearly shown in the coloured diagrams which accompany this paper. The tints given are only approximate. If it were possible to reproduce the exact shade still greater variety would be evident. The first diagram shows the tint excited by the spoken vowel sounds in twenty-one individuals, while the second shows the coloured letters which are visualized by five subjects respectively, when they think of a word. It will be seen at once that the same sound is associated with a different colour in the case of each person, and the phenomenon cannot therefore depend on any physical relationship between sound and colour as has been supposed. The process is an individual and psychical one.

For further particulars of this interesting subject we must refer our readers to the original paper. It is illustrated by a coloured plate. *St Clair Thomson.*

Etrévant.—*On Monaural Diplacusis.* "Ann. des Mal. de l'Oreille," Nov., 1897.

BINAURAL diplacusis is a phenomenon not infrequently observed, but as a monaural symptom diplacusis is exceedingly rare, and the author is unable to quote more than three recorded cases (Gradenigo, two; Bressler, one). He has himself met with two examples in Lannois' clinic.

Case 1. A woman of fifty-seven, giving a history of earache on the right side in childhood, and of otorrhœa on the same side at the age of fifty. After influenza, three years ago, deafness increased and the phenomena to be described developed.

(1) Sounds repeated at intervals of one second seemed to be separated by not more than a quarter of a second.

(2) A sound of the human voice (her own or another's) was heard as three

different sounds, the additional sounds being in a lower key than the original. These phenomena were constant. Rapid speech was heard as a confused, and as it were, musical sound. Hearing proved to be entirely lost on the right side, while the left membrana tympani was thickened and depressed. Loud tinnitus ("falling water") was present.

After six catherizations hearing was improved and the triple resonance less marked.

Case 2. A woman, with complete loss of hearing on the right side. Loud tinnitus constant and pulsating. A single note of the human voice was heard as four or five notes—some higher, some lower in tone than the original. There was no regularity in the gradation of the sounds perceived. Evidences of advanced sclerosis were present in either ear. This dysharmonic polyacusis ceased after repeated catheterization, which also improved the hearing.

These phenomena may, perhaps, depend upon the presence of areas of diverse tension in the altered tympanic membrane. *Ernest Waggett.*

Goldstein, M.A.—*Bilateral Syphilitic Ulceration of the Auricle.* "The Laryngoscope," Jan., 1898.

PRIMARY syphilis of the auricles is a rarity; secondary syphilitic affections of the auricle are, however, frequently met with, especially as an extension to this locality from diseased areas upon the face and neck. Cases of tertiary syphilis of the auricle have been recorded by several observers, especially when due to extension of ulceration from adjoining parts; but the existence of symmetrical tertiary lesions upon the auricles, without any other syphilitic lesion or eruption, has not been previously recorded. In this case the patient was a male, aged twenty-five, who, about seven weeks before applying for treatment, had noticed several small nodular masses making their appearance upon the right auricle. The nodules gradually increased in size, and covered a considerable portion of the concha and lobule. Two weeks later similar nodules appeared upon the left auricle. The infiltration was succeeded by softening and ulceration. After removal of all scabs, three deep, well-defined, kidney-shaped ulcers, with red bleeding surfaces, were found upon the right auricle, two similar ulcers upon the left.

Six years previously the patient had contracted syphilis. Rapid reduction of the ulcerations followed the administration of fifteen-drop doses of a saturated aqueous solution of iodide of potassium. A short bibliography relating to cases of syphilitic lesions of the auricle accompanies this paper. *W. Milligan.*

Gradenigo (Turin).—*Intramuscular Iodine Injection by Durante's Method.* "Monats. für Ohrenheilk.," No. 10, 1897.

SECRETION becomes more fluid; fœtor less; sometimes vanishes; no bad effects; injection is painful. At the same time, favourable influence on existing ear affections.

Grunert, K.—*On Extradural Abscess proceeding from the Ear.* "Münchener Med. Woch."

GRUNERT discussed the pathological anatomy and clinical history of extradural abscess from the material in Schwartze's clinic. In describing the pathogenesis he emphasized the predisposition to extradural abscess in acute forms of otitis rather than by chronic forms; further, the frequency of external pathways (small fistulæ arranged like pearl strings, with pneumatic bone cells clothed with a purulent infiltrated mucous membrane) which can be followed from the middle ear to the extradural collection of pus. Extradural abscess is especially apt to form in those cases of acute otitis which are characterized by an inclination to a rapid

course, and which usually depend on infection by the pneumococcus (Zaufal and Leutert). Further on he describes the situation, extension of the extradural collection of pus, the condition of the affected dura mater, and the contents of the abscess.

In the description of the so-called deep extradural abscesses which are situated on the pyramid of the os petrosum, he described, besides the known ways of origin, a new one—the carotid canal. He demonstrated a temporal bone which showed the anatomical connections. In the clinical part of his paper, Grunert spoke on the uncertainty of diagnosis, which does not exceed the value of a probable diagnosis. As a rule, at least in cases of chronic otitis, extradural abscess is found during the operative procedure of the mastoid operation, by the discovery of an external pathway of the kind described.

He referred to all the signs which have been thought to be of value in the diagnosis of extradural abscess. An extradural abscess is not easily overlooked in the cases of chronic otitis, when the ear condition indicates the undertaking of opening the mastoid, in which, as a rule, external sinus is met with. More unfavourable are the conditions in acute cases where there is delay. Such delay often becomes fatal for the patients. Among the appearances which must give rise to the suspicion of the existence of an extradural abscess, he considers of importance the incongruence of the subjective symptoms and the objective ear condition—severe pain in the ear or on one side of the head, with a scarcely hyperæmic membrane, and no appearances of inflammation on the mastoid process, etc.—far the most important symptom; and states that those physicians who can examine the ear, in consequence of this incongruence are inclined to consider such patients as malingerers. Further, he states that extradural abscesses following acute otitis are often mistaken for so-called occipital neuralgia. Further, he describes the treatment, which, on account of the nature of the disease, can only be operative; that the prognosis of operative treatment of extradural abscess is very favourable when not complicated with other intracranial complications of otitis, confirmed by communication of the good results of operative treatment from Schwartze's clinic.

Lake, R.—*Contribution to the Surgical Anatomy of the Tympanic Antrum.* "Lancet," Nov. 13, 1897.

THOSE who have frequent occasion to open the tympanic antrum must constantly be forcibly reminded of its irregular position, especially as affects its relations to the lateral sinus; those with the tympanum itself, and also with the facial nerve, being fairly constant, and only affected by the size of the antrum, whether that size be the result of disease or not. The results of careful measurements of twenty-eight temporal bones not affected with disease has enabled the author to form a series of sketches, each typical of a certain number of sections. The sections were cut horizontally, passing through the suprameatal fossa. Each section has been carefully traced, and these tracings compared by being superimposed. In this way groups were formed, and a typical section was drawn from each group. It was found that these might be arranged in three main divisions—viz., (1) those in which the groove for the sinus lateralis must be opened and the sinus exposed during the mastoid operation; (2) those cases in which the antrum is operated on—the probabilities are that the sinus will be exposed, yet it may escape; and (3) those cases in which the sinus will not come into view during the operation.

Another conclusion is that one might expect to expose the sinus about once in six operations.

The act alone of exploring the sinus is one which, provided antiseptic precautions are taken, seems to be entirely without danger; and even where the sinus

itself is opened careful plugging with iodoform gauze controls the bleeding, and in no case has any ill effect been recorded, though the same cannot be said for puncture of the sinus with the drill. The use of the electric or dental burr is likely to reduce the number of times the sinus is exposed, as one can work with a straighter—that is, a less funnel-shaped—wound in the bone; and it is usually due to this alone that such accidents occur if the operator is working with a knowledge of the general position of the cavity. Continuing the relative measurements as far as one can from these sections, maintaining the original reservation that such a number can only give approximate accuracy, one finds the average depth of the attic to be a little over three-tenths of an inch, taken in a direct line from the point of election, and the distance of the nearest point of the sinus 0·48 inch on an average, with 0·2 inch as a minimum and 0·7 inch as a maximum; this last measurement demonstrates clearly that exposing the sinus by a continuation of a previous antrum operation is, as a rule, not only the proper surgical procedure, but the quickest route to the sinus, as the distance of the sinus is often less than a quarter of an inch from the suprameatal fossa.

The results are made more apparent by reference to the diagrams which illustrate this communication. *StClair Thomson.*

Ryerson, G. S.—*Cerebral Abscess.* "Canadian Med. Review," Dec., 1897.

THE author reports two cases of cerebral abscess following middle ear disease. (1) A young lady, aged eighteen years, had suffered from chronic discharge from the ear for fifteen years. It then suddenly ceased. Three months later she consulted him in reference to severe pain in the head. There was swelling and redness of the external ear, with slight fœtid discharge; also caries of external auditory process, but no marked tenderness of the mastoid. There were not indications enough for trephining. Patient gradually fell into a comatose condition and died.

(2) A child. Had been in failing health for three months. Was then called to attend it for acute inflammation of the middle ear. Discharge not profuse. Tenderness over mastoid not marked. Slight outward squint. Ophthalmoscopic examination showed double optic neuritis.

In this case, too, indications were not sufficient to justify surgical interference. The patient died. The doctor believed that treatment in each case was too late to be of any avail. *Price Brown.*

REVIEW.

Gordon, H. Laing.—*Masters of Medicine. Sir James Young Simpson and Chloroform.* (T. Fisher Unwin, Paternoster Square, London. 3s. 6d.)

THIS the third volume of the series, is fully equal in interest to its predecessors, though, not unnaturally, as we come nearer to our own time, some of that romance indissolubly attached to all things of more remote periods and times more dissimilar to our own is wanting. Against this questionable loss Dr. Gordon presents us with a continuous narrative with no speculative periods. A narrative full of interest is the