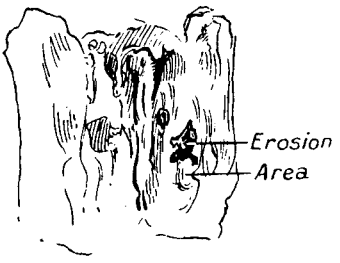
Two days later developed symptoms of meningitis. F. O.: Right blurred and left same; optic neuritis. October 4: Died with symptoms of general meningitis. *Post-mortem* examination: Acute purulent meningitis originating from an area of erosion in the middle ethmoidal cells roof—*i. e.* opposite side to operation.[1] N.B.—(1) There was a normal left frontal sinus, but no right frontal sinus could be found; (2) if a right pre-nasal frontal sinus operation had been attempted (as had been the case some months previously by another operator) it must have failed and the rapidly following death with the *post-mortem* finding would have



Sketch showing the crista galli (in median line) and, on either side of it, the cribriform plate and other parts of anterior fossa forming roof of nasal passages. On the right side the erosion area is indicated.

suggested the operation as the cause of meningitis; (3) if the right antrum had been operated on at the same time as the left, instead of months previously, it would also have caused suspicion of traumatism or thrombo-phlebitis due to operation as the cause of death. This case has therefore a medico-legal interest.

Abstracts.

PHARYNX.

Rolleston, J. D., and Macleod, C.—Intramuscular Injections of Antitoxin in the Treatment of Diphtheria. "British Journal of Children's Diseases," vol. xi, No. 289.

The authors conclude that intramuscular injection, preferably in the vastus externus, deserves to supersede all other methods of administration of antitoxin in the treatment of diphtheria for the following reasons: (1) It is quite as simple as the subcutaneous method, ensures much more rapid absorption, is less painful, and less liable to give rise to abscesses at the infection site. (2) It is superior to the intravenous method, not only in the greater simplicity of its technique, but also in the less rapid excretion of antitoxin after injection. (3) The more rapid absorption of antitoxin by the intramuscular route is shown, not by the effect on the faucial or laryngeal process, but by the lesser incidence of paralysis, especially of a severe kind. *Macleod Yearsley.*

[1] For a similar case see JOURN. OF LARYNGOL., RHINOL., AND OTOL., vol. xxvii, p. 538.

Johnson, H. R.—Case of Cavernous Sinus Thrombosis of Otitic Origin with Recovery. "Laryngoscope," February, 1913.

The author is of the opinion that this is only the second case of recovery recorded from cavernous sinus thrombosis, the other one being a case of Adair-Dighton's ("Annals of Otology," June, 1912).

A male, aged fifty-nine, was operated on for acute mastoiditis following acute otitis media. Eight days later rigors commenced and continued for five days, when the case was seen by the author. The patient then was in a condition of acute sepsis with effusion into the right knee-joint. The mastoid wound was unhealthy, and there was chemosis and congestion of the left eye with drooping of the lid. Next day there was marked left proptosis and chemosis with intense bilateral papillitis. The lateral sinus was exposed and found to be thrombosed. Clot was cleared out back to the torcular and the jugular ligatured in the neck. Only one rigor took place after operation and recovery slowly took place, the proptosis and orbital swelling subsiding, but with complete loss of vision from post-neuritic atrophy. *A. J. Wright.*

NOSE.

Tirumurti, T. S.—Rhinospiridium Kinealyi. "The Practitioner," vol. xciii, p. 704.

Rhinospiridium Kinealyi is a sporozoon parasite. Its study leads to certain conclusions, the first of which is that the name given to it by O'Kinealy is a misnomer, since it occurs in other situations, although it prefers the nasal mucosa. Infection is probably conveyed by clothing, handkerchiefs, or hands. The spores are discharged in the nasal secretion, which is profuse. As the growth of the parasite is one of long duration, the source of infection is forgotten and the history difficult to elicit. The preponderance of the parasitic cysts in large numbers, mainly in the epithelial and sub-epithelial tissues, is suggestive of the mode of conveyance by infected nasal secretion. The parasite may be conveyed by sexual congress, as it has been found in the penis. It is likely that rhiniosporidial polypi may occur in the mouth, anus, and vagina. The recurrence and innumerable number of cysts in different stages of development show that the sporozoon undergoes its complete cycle of developments in the human body, without the intervention of an intermediary host. Most cases come from Malabar, but a few have been found in Peramber, Trichinopoly, Tinnevelly and Dindigul. A single instance has been recorded in America. *Macleod Yearsley.*

EAR.

Plummer, Edward M., and Mosher, P. Harris (Boston, U.S.A.).—A Report of the Results of Seven cases Operated upon by Mr. Heath. "Annals of Otology," etc., March, 1914.

A week before the Ninth International Otological Congress in Boston in 1912, Mr. Charles Heath, of London, was given the freedom of the Aural Department of the Massachusetts Charitable Eye and Ear Infirmary. He selected seven cases upon which he operated with his own instruments and with the help of his own assistant, and carried out the after-treatment himself for two weeks. After his departure the cases were dressed by the writers of this article and occasionally by the senior house officer. At first Mr. Heath's method of after-treatment was

followed rigidly, but when certain cases failed to respond the usual after-treatment of the hospital was substituted. Seven months after the operations all the patients were asked to report, but only four responded.

The present report is issued without obtaining the formal consent of Mr. Heath, who had, however, stated that he wished a candid and impartial consideration of his work.

The first case was one of recurrent acute suppurative otitis media with mastoiditis. The case was not dry at the end of two months. The second case was apparently also acute, but at the operation Mr. Heath thought that cholesteatoma was present. The second case was dry in four months.

Plummer and Mosher, in their summary of the results, state that there were two cases of otitis media suppurativa with mastoiditis; two cases of otitis media suppurativa acuta with mastoiditis and post-aural abscess (one of these cases was recurrent); three cases of otitis media suppurativa chronica. Two of the seven cases required re-operation. Of the acute cases two are known to be dry and to have the antrum filled in and epidermatised, and to have healed tympanic membranes. The shortest time in which the middle ear became dry was seven weeks and the next three months. The third case had the antrum dry and epidermatised in two months and a half but the middle ear was still moist.

Two of the three chronic cases are still discharging after seven months.

Of the two re-operated cases, the first was two thirds healed at the time of writing and the second was cured.

The results as regards hearing in the seven cases are as follows: In the first of the acute cases there has been no impairment. In the second the hearing was not impaired when the patient was discharged from hospital. In the third the writers presume that little, if any, impairment of hearing has followed the operation. In the fourth and last of the acute cases the radical operation was necessary and a severe loss of hearing has resulted.

As regards the hearing result in the three chronic cases: One shows a slight loss since operation and one a considerable loss. In the third case the patient was practically deaf in the diseased ear and probably shows but little loss; this case did not report.

The writers acknowledge that as Mr. Heath did not carry out the whole of the after-treatment himself, the results are sure to be less favourable than they would have been had he done so. The writers remark that if Mr. Heath's operation is to be done by any one except himself, the after-treatment must not be so difficult that men of average ability cannot carry it out.

As regards the cosmetic result, Plummer and Mosher acknowledge that the scar left by Mr. Heath's operation is the best looking scar known to them, but they state that the tip of the mastoid and the lateral sinus are not easily dealt with through Mr. Heath's incision. When questioned about this, Mr. Heath replied that he was always ready to make a supplementary horizontal incision if necessary. He did not find it necessary, however, to do this in any of the seven cases, in spite of the fact that in one of them he missed the antrum and unknowingly, and fortunately, missed a forward lying sinus.

The writers state that after operation everything at first looks very nice, but a bit later, when, in spite of all care, granulations begin to spring from the bridge, the picture changes to a less pleasing one. These granu-

lations soon obscure a large part of the drum-head and dam back the discharge. In some cases the superior wall of the canal sags and the flap made from the posterior wall breaks from its moorings and projects forwards into the lumen of the canal, obscuring the view and hampering the dressings.

Plummer and Mosher admit that three of the four acute cases did well, but hold that in none of the three was the time necessary to accomplish a good result as short as is often the case when the usual operation for acute mastoiditis is performed.

None of the chronic cases did as well as they would have done had the radical mastoid operation been performed. The serious defect of the Heath operation is that it attempts to deal with the mastoid process from an awkward angle and through a restricted space, namely, the posterior canal wall. "The vital defect of the operation is insufficient exposure of the mastoid surface and incomplete removal of pathological conditions within it."

The writers state that they are under great obligation to Mr. Heath for reviving the question of operating early, both in acute and chronic cases, in order to preserve as much of the hearing as possible. They praise Mr. Heath's mechanical dexterity and his generous personality and they consider that he has made the otological world stand and reconsider. *J. S. Fraser.*

MISCELLANEOUS.

Whale, Harold H.—Salvarsan in the Treatment of Syphilis of the Upper Air-passages and Ears: Illustrated by thirty-seven cases. "St. Bartholomew's Hospital Reports," vol. l, p. 1.

This excellent and useful paper offers the following conclusions: (1) Salvarsan and allied drugs offer an encouraging prospect of cure in syphilis of the upper air-passages, especially of the nasal walls. (2) The prognosis as to cure is affected by the duration of the infection rather than of the lesions. (3) 606 is rather more effective than 914. (4) Between injections mercury, without iodides, should be given. (5) The Wassermann test disagrees with the clinical findings in a proportion of cases which is insufficient to discount the value of this test. (6) In syphilitic affections of the labyrinth, the prospect of improvement is greater for the vestibular than for the cochlear apparatus.

Macleod Yearsley.

Stetten (New York) and Rosenbloom (Pittsburgh).—Clinical and Metabolic Studies of a Case of Hypo-pituitarism due to a Cyst of the Hypophysis with Infantilism of the Lorain Type. "Amer. Journ. Med. Sci.," November, 1913.

Previous studies of metabolism in perversions of the pituitary gland have been concerned for the most part with hyperpituitarism (acromegaly). The case here reported, however, of which the writers made a detailed study, was a typical example of the opposite condition—hypopituitarism. The condition was due to a cyst of the hypophysis affecting a male, aged twenty-two, and giving rise to blindness, headache, and infantilism. The cyst was exposed and its lower wall removed by Kanavel's infra-nasal sublabial transphenoidal route, and the operation was followed by complete disappearance of the headache and marked improvement in the patient's

general condition. The loss of vision, which was complete in one eye and very marked in the other, remained uninfluenced by the operation.

A careful study of the patient's metabolic processes showed a marked perversion leading to high and abnormal percentages of neutral sulphur and undetermined nitrogen in the urine. *Thomas Guthrie.*

Fraser, Francis R. (New York).—Epidemic Poliomyelitis. "The Journal of the American Medical Association," January 18, 1913.

The virus of poliomyelitis is present on the mucous membrane of the nose and throat, not alone of persons ill of the disease, but also, according to Fraser, of healthy individuals who have been exposed to the contagion. In support of his contention the author cites the following case: The parents of a child, who had a typical attack of epidemic poliomyelitis, were subjected to a naso-pharyngeal irrigation with normal saline solution. This fluid was injected into a monkey, and in the course of twelve days paresis of both legs appeared. Sections of the spinal cord and medulla showed the typical lesions of experimental poliomyelitis. An emulsion of the spinal cord of this monkey was injected into a second monkey, which caused a similar paralysis, with similar *post-mortem* findings.

From the above the author concludes that the virus of the disease is present in the naso-pharynx of healthy persons who have been in close contact with an acute case of poliomyelitis, and that these people are passive carriers of the infection. *Birkett (Rogers).*

REVIEWS.

Die Syphilis der Unschuldigen (Syphilis Insontium). Lecture by Prof. P. H. Gerber (Königsberg). Published by Curt Kabitzsch, Würzburg. 1914.

This is a lecture delivered to a more or less popular audience in the East Prussian Branch of the Society for the Campaign against Sexual Diseases. The writer fully justifies the task of delivering this lecture being entrusted to him as a specialist in diseases of the nose and throat, because, as he says, almost a half of all cases of syphilis insontium arise from infection in the mouth and throat. To show the frequency of its occurrence and the necessity for its frank recognition he quotes largely from Bulkley's well-known American monograph on the subject. Though the points brought forward are familiar to our readers they cannot be too often insisted upon in despite of the unhealthy prudery which is apt to keep them in the background, and this lecture is a very good model on which such instructions may be moulded.

Dundas Grant.

Le Traitement des Stenoses Aigues du Larynx (Treatment of Acute Stenosis of the Larynx). By Dr. Guillermo Zorraquin (Buenos Ayres). Paris: Vigot Frères, 1914. Pp. 45. Price 2 francs.

In this interesting and original brochure, Dr. Guillermo Zorraquin compares and criticises the methods of intubation and tracheotomy in cases of acute stenosis of the larynx, more especially those arising from such infective conditions as diphtheria. He indicates that intubation is not quite such a simple and smooth-going proceeding as is apt to be supposed, the chief objections to it being the difficulty in swallowing