covered by a few flattened epithelial cells and resting on the submucosa of the conjunctiva, which latter shows no evidence of infiltration. The cells of the nodule are arranged in large alveoli and are mostly small with a large nucleus. At the centre of each alveolus are some large epithelial cells. The tumour is non-pigmented and contains a few small blood-vessels resembling capillaries. **Diagnosis:** The tumour is no doubt a congenital mole. *Recurrent growth.* The tissue consists of the whole thickness of the conjunctiva, in the deeper tissues of which is a small round nodule. This nodule consists of cells resembling the smaller cells of the primary tumour. The nodule is not encapsulated and in one portion the cells are infiltrating the surrounding tissues. The conjunctiva is more vascular than usual. There are no definite blood-vessels in the nodule. **Diagnosis:** The tumour now is undoubtedly sarcomatous.

Unquestionably these reports show the tumour to have been an alveolar sarcoma, for although the primary growth microscopically is described as a mole it was no doubt clinically becoming a sarcoma—at least, the rapid increase in size noticed by the mother indicates this in all probability.

West Hartlepool.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ROYAL EAR HOSPITAL, SOHO.

A CASE OF CHRONIC SUPPURATIVE OTITIS MEDIA WITH CHOLESTEATOMA; RADICAL MASTOID OPERATION; COMPLICATIONS; HERNIA CEREBRI; TEMPOROSPHENOIDAL ABSCESS; MANIACAL DELIRIUM OF LONG DURATION; RECOVERY.

(Under the care of Mr. MACLEOD YEARSLEY.)

FOR the notes of the case we are indebted to Mr. J. Arnold Jones, house surgeon.

A youth, aged 18 years, was first seen by Mr. Yearsley at the Royal Ear Hospital on Sept. 27th, 1905. The patient was suffering from a chronic discharge from the left ear of about five months' duration. He was sent by Mr. J. Blackwood of Southsea, under whose care he had been for some time and who some three weeks previously had removed polypoid tissue from the meatus. On examination a perforation was seen in the anterior part of Shrapnell's membrane through which a foetid discharge issued. The watch could not be heard at all by the left ear and the tuning fork showed Rinné negative with bone conduction diminished by eight seconds. The patient complained of slight vertigo and vertical headache.

A thorough course of irrigation with perchloride solution (1 in 2000) and the instillation of hydrogen peroxide was the line of treatment at first adopted, but no improvement ensuing it was decided to perform the complete post-aural operation. This was done on Nov. 9th by Mr. Yearsley, assisted by Mr. A. Logan Murison, chloroform being administered by Mr. J. H. Chaldecott. The usual incision was made, the upper and posterior portions of the cartilaginous were separated from the bony meatus, and the whole ear was turned forwards. The antrum was then approached with a hand gouge and discovered to be much dilated and full of foul cholesteatomatous masses. There was a large hole, something under the size of a threepenny-piece, in the tegmen antri with a ragged tear in the dura mater through which a small knuckle of congested brain protruded. The "bridge" of bone between the antrum and the tympanic cavity was removed, a Körner's flap was cut in the cartilaginous meatus, the cavity was packed with gauze, the incision was sewn up, and the usual dressings were applied.

During the next three days the patient appeared to be comfortable and doing well, still, however, exhibiting a certain childishness or simplicity of manner which had been

noted on his admission. The temperature, which was 99° F. on admission, oscillated between that and 99·6°. The pulse was 84, regular, and strong. On Nov. 13th the temperature became 101·4° and the first dressing was done. The post-aural wound was sound but there was a rather foul discharge from the meatus. Hydrogen peroxide was instilled and the cavity was syringed through the meatus with perchloride solution. On the 14th the temperature was normal; the wound was again dressed, the discharge being about the same. The general condition of the patient was quite good. The dressing was now done every day in the same manner; the discharge persisted, the temperature varying from normal to 100·6°. On the 18th, in the evening, the temperature reached 102°. The patient complained of headache and cold feet. The pulse was 84, strong, and regular. There were no ocular or other localising symptoms. On the 19th the temperature remained high and the dressing was very foul, the headache became worse, and the patient began to be restless. On the 20th the temperature at 11 A.M. was 102·8°. The patient had developed pains in the neck and back, the headache persisted, but the discharge, although still free, was sweeter in character. The tongue was very furred in spite of good action of the bowels resulting from aperients. The general appearance was quite good. There were no localising symptoms. The pulse was 92, strong, and full. He was ordered ten grains of calomel. On the 21st the patient seemed to be somewhat better. He was not so restless and the pains in the neck and back were less. The dressing was comparatively sweet but not so free. The temperature was 101°. Towards 8 P.M., however, he became much more restless. He did not respond very readily to questions and began to cry out loudly and frequently. 40 grains of potassium bromide having no effect five minims of morphine were ordered to be injected, but this and a further three minims only procured two hours' sleep.

On Nov. 22nd the patient appeared to be worse. He was more emaciated, his mouth was dry and ulcerated, and his tongue was very furred, although the bowels were freely acting. The pulse was 92, full, and strong. The temperature was 102·2°. At frequent intervals he uttered a curious animal cry; there were no localising symptoms of any kind. His knees were drawn up and the muscles of the legs were rigid. He apparently recognised no one and took no notice when spoken to. He was seen by Mr. Yearsley and Mr. R. Lake in consultation and further operation was decided upon. This was done the same afternoon by Mr. Yearsley, assisted by Mr. Lake and Mr. R. S. Cocke. Chloroform was administered by Mr. Chaldecott. The wound was reopened and the antrum was found to be filled by a gangrenous hernia cerebri. This was shaved off and a quantity of foul pus escaped. An abscess in the temporo-sphenoidal lobe was discovered of about the size of a walnut; this was evacuated and washed out. A large double drainage-tube was inserted. The post-aural wound was left open and the usual dressings were applied. After the operation the temperature at 6 P.M. registered 100·5° and the patient remained quiet until about 7 P.M., when he once more became very restless and more boisterous than ever; an injection of morphine (one-quarter of a grain) was given which, with one drachm of potassium bromide, kept him fairly quiet until 7 A.M. on the 23rd when he became uncontrollably noisy. The morphine (one-quarter of a grain) was repeated and again his delirium was held in check. At 2.15 P.M. he was dressed under ethyl chloride anaesthesia administered by Mr. Chaldecott. The tubes were irrigated with boric lotion but, with the exception of some organised clot, very little discharge came away. The temperature at 6 P.M. was 99°, the pulse was 92, and the respirations were 20. The patient again becoming very restless one drachm of potassium bromide every hour until he was quiet was ordered, but this having little effect after six drachms had been administered, an injection of a quarter of a grain of morphine was given and repeated in three and a half hours. In spite of these hypnotics only three hours' rest were obtained during the night, the remainder of the time being spent in tossing about the bed, shouting at intervals his curious piercing cry. The patient all this time took large quantities of nourishment in the form of whey and beef-tea, consuming in the 24 hours 35 ounces of the former and 13 ounces of the latter.

On Nov. 24th the patient slept all the morning, with the exception of an hour. At 2 P.M. the wound was again dressed in the same manner as the previous day; it was in the same condition. The temperature varied from 99° in the morning to 101·2° at night. 30 grains of chloralamide,

followed in three hours by eight grains of veronal, procured him five hours' sleep during the night. On the 25th he appeared weaker and more emaciated: he was still restless, though calling out at longer intervals and with a feebler cry. The pulse was 108, weaker, but irregular. The highest temperature was 101° . The wound was dressed under ethyl chloride anaesthesia. The tubes were removed. An offensive discharge came away. Gauze packing was inserted.

The patient now continued to become progressively weaker and more emaciated, though still restless and crying out, having little sleep in spite of the exhibition of chloralamide, veronal, and potassium bromide in large doses. He remained unconscious of his surroundings. At 2 P.M. on Nov. 27th he became more sensible, answering when spoken to, but with delayed cerebration, having to be kept rigidly to the point. On the 28th a gangrenous hernia cerebri was discovered in the cavity and excised, the healthy brain tissue being kept in the middle fossa of the skull by packing a piece of tinfoil against it with gauze. The pulse now became much weaker in character, easily obliterated, and varying in rate from 90 to 110, and somewhat irregular. His restlessness and noisiness became more difficult to control, chloralamide, veronal, potassium bromide, chloral hydrate, and morphine in large doses, separately and together, producing little result.

On Dec. 1st the mother for the first time admitted a definite family history of insanity. The exposed portion of the hernia cerebri being now covered with granulations the tinfoil was discontinued, the whole cavity being firmly packed with iodoform gauze after the usual cleansing with antiseptic lotions. During the next three days the patient lost still more weight, becoming very weak and emaciated though continuing his noisy delirium unabated and very little controlled by drugs. From 2 P.M. on Dec. 1st to 2 P.M. on the 2nd he was given two drachms of potassium bromide and 40 grains of chloral hydrate and two and a quarter grains of morphine by subcutaneous injection. All this time he was taking large quantities of nourishment in the form of milk, whey, and beef-tea. The temperature, which had shown daily variations between 99° and 101.8° until Nov. 27th, began on that day to fall gradually, remaining about normal during Nov. 30th and Dec. 1st. On Dec. 2nd and 3rd it again rose, reaching a maximum of 99.8° , falling to normal on the 4th, to remain at that level during the remainder of his illness.

On Dec. 4th the patient's condition had reached its lowest limit and he was considered to be beyond recovery. He was taking much less nourishment, was extremely feeble and wasted in appearance, although unabatedly noisy and at times spasmodically violent. The pulse was 92, weak, and thready. The dressing for the first time was done without an anaesthetic, his general condition being deemed too bad. 30 grains of sulphonal and two drachms of paraldehyde were ordered; during the night he had further nine drachms of the latter drug, this combination producing the quietest night he had had since the second operation. On Dec. 5th the patient was a trifle better and was again dressed without an anaesthetic. This improvement was steadily maintained during the next couple of days, he took more nourishment, and passed comparatively quiet nights on large doses of paraldehyde. On the 8th he was very markedly better physically, while mentally he was more sensible than at any time since the second operation. The pulse was more full and steady. Very little discharge now came from the wound and the cavity was lined with healthy granulations. With some short lapses into noisy delirium he now progressed satisfactorily and on the 10th was allowed a little fish. On the 12th his mental condition showed a very decided advance; he talked quite sensibly, recognised the people about him, and answered questions with reason but somewhat delayed cerebration. He was taking very large quantities of food in the form of fish, minced meat, bread, and milk. On Dec. 14th it was found possible to discontinue all hypnotics. On this date, also, it was decided to close up the post-aural wound and to pack the cavity through the meatus. Chloroform and ether mixture was administered. The edges of the wound were pared, freshened, and united with interrupted sutures. An incision to relieve tension was made parallel and posterior to the original one. The cavity was packed through the meatus with iodoform gauze and the usual dressings were applied. From this time onwards the patient's progress was one of steady and uninterrupted improvement. The ear was dressed every day and on Dec. 17th he was up for a short period.

On Dec. 21st the patient was discharged from the hospital in a very satisfactory condition. There was still a little discharge from the post-aural wound and some through the meatus. He was sent back to Southsea under the care of his medical adviser, Mr. Blackwood, who has from time to time given information as to his continued and steady progress.

Remarks by Mr. MACLEOD YEARSLEY.—There are several points of interest in the above case. When first seen in September no indication of the condition in which the mastoid antrum must have been was given either by the symptoms complained of or by the signs observable. The fact that there were slight vertigo and headache was only elicited by questioning and these symptoms were unaccompanied by nystagmus. Perforations in Shrapnell's membrane that do not respond to careful treatment are, however, always to be regarded with grave suspicion, and the radical mastoid operation was recommended when on the second examination, about one month later, the condition was found to be unchanged. Even then the case did not appear urgent and consequently a month elapsed before the exigencies of a small special hospital allowed of his admission. A subsequent letter from Mr. Blackwood contained the information that for a week before admission the patient exhibited a peculiar irritability of temper and slight restlessness quite unlike his usual disposition. The small knuckle of brain seen at the first operation was noticed to be much congested and it is highly probable that the condition of encephalitis which subsequently gave so much anxiety was already begun. I had hoped that the careful packing up of the meatal flap would have barred the communication found between the antrum and the cranial cavity, but this failed.

Another point of interest was the entire absence of localising symptoms when the intracranial complication manifested itself. The most careful examination failed to discover any indication of the condition and retinoscopy revealed nothing. This was doubtless due to the fact that the hole in the tegmen antri and dura mater prevented any intracranial pressure, but it is interesting to note that at no time was there a "cerebral" pulse, Cheyne-Stokes respiration, tache cérébrale, or any other of the classical signs which might have been expected. Further operation was, however, an obvious necessity. Although the cerebral hernia then found was in a state of gangrene, the discharge had become quite sweet for the two days previous.

The subsequent history of the case is most instructive, especially as regards the large amount of nourishment taken and the enormous quantities of hypnotics that were required to keep the patient even moderately quiet. In the 24 hours between 10 A.M. on Nov. 26th and 10 A.M. on the 27th the patient took 72 ounces of milk and whey with ten ounces of beef-tea, whilst in several other periods of 24 hours the amount was not far short of this. On the night of Nov. 23rd he took six drachms of bromide of potassium in one-drachm doses and then required half a grain of morphine to induce quiet. On Dec. 3rd he received two and three-quarter grains of morphine in half and quarter-grain doses, whilst on Dec. 5th no less than ten drachms of paraldehyde with 30 grains of sulphonal had to be administered. Probably the extraordinary capacity for hypnotics was due, or partly due, to the encephalitis. In cases of cerebral complications accompanied by excitement it is always difficult to obtain sleep or to allay the delirium and restlessness, but I have never yet met with one in which such enormous doses of hypnotic drugs have produced so little effect.

In such cases as this recovery is largely due to assiduous nursing and I must pay tribute to the unremitting patience and care with which the house surgeon, Mr. Jones, and the special nurses in charge of the case performed their arduous duties.

Remarks by Mr. CHALDECOTT.—From an anaesthetic point of view this case afforded a valuable illustration of the usefulness of ethyl chloride for cases in which rapid induction of anaesthesia is essential. On several occasions it was necessary to dress the wound under an anaesthetic, the patient being at the time wildly maniacal; in the circumstances gas and ether were contra-indicated and owing to the patient's struggles it would have been a matter of some difficulty and danger to induce anaesthesia with chloroform. On each occasion, therefore, I commenced the administration with ethyl chloride, which acted with great rapidity, the patient's struggles ceasing after two or three inspirations, the ethyl chloride being then discontinued and chloroform substituted.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Value of a Serum (Doyen's) in Cases of Malignant Disease.

A MEETING of this society was held on March 27th, Mr. J. WARRINGTON HAWARD, the President, being in the chair.

Dr. A. PAINE and Dr. D. J. MORGAN communicated a paper on the Value of a Serum (Doyen's) in Cases of Malignant Disease, which will be found at page 955 of our present issue.

Mr. E. SETON PATTISON said that he had had two cases under his care which had been treated by Doyen's serum, in both of which improvement had taken place but the result had not been permanent. The first case was that of a man, aged 68 years, who had been a great smoker and had suffered from leucoplakia of the tongue for several years. In 1904 he developed extensive epithelioma of the tongue, both sides being involved. The breath was offensive, blood-stained mucus dribbled from the mouth, and the patient was emaciated. Pain was very severe and radiated in all three divisions of the fifth nerve. This patient was treated by Doyen's serum in Paris. After four injections the pain was much less and the general condition improved. After one month's treatment the patient had gained flesh, was able to take food well, and the pain had almost gone. About this time small brown sloughs came away from the growth, and in March, 1905, a large slough came away which caused bleeding from the lingual artery. As this could not be controlled both arteries had to be tied. The tongue became pinkish white in colour and the growth smaller. The improved condition was not long maintained, for the patient developed patches of growth on the gums and died in December. The second case was that of a woman who four years previously had had extirpation of the uterus for malignant disease. A tumour developed in the abdomen which on exploration was found to be malignant. The patient suffered greatly from constipation and from attacks of pain in the abdomen and vomiting. Injections of serum were now given and during two months the patient had 24 injections. She gained weight and improved greatly and her constipation was relieved after, as she said, "something had given way inside." She returned home greatly improved but died shortly afterwards. In another case of malignant disease of the breast, after injections of serum, the growth seemed to be retarded but the patient was not otherwise improved. In another case of recurrent cancer of the breast pain was relieved by the injections but the growth was not arrested.

Mr. CHARLES RYALL referred to the psychical effect produced by the serum and said that this was far greater in Paris, where the patients went to receive injections which were to cure the disease, than at the Cancer Hospital, where the patients knew that they were receiving injections of serum which were being tried experimentally. The symptoms produced by an over-dose of the serum appeared to be very similar to those produced by injections of Coley's fluid. He referred to the case of a malignant tumour of the breast which had been treated with serum and in which subsequently the growth was removed; this he considered a most suitable case for investigating the efficacy of the serum but it failed to produce a favourable result.

Mr. J. HOWELL EVANS said that periods of exacerbation and amelioration almost always occurred in the course of any malignant growth and if the injections of serum were administered during a period of amelioration the improvement would be attributed to the serum. It was most important to bear this in mind when considering the case. Pain again varied considerably and the effect of emotion was often very marked. A word of encouragement would frequently improve the physical condition of a patient in a very striking manner.

Mr. R. H. J. SWAN referred to the case mentioned by Dr. Paine of recurrent nodules at the back of the neck. He had examined the growth before and after treatment by the serum and the appearance was exactly the same in each case. He would have thought that if the serum produced any effect the appearance of the growth would show some change after the injection. With regard to the case mentioned by Mr.

Pattison, in which the lingual artery was tied, he suggested that the improvement was due to the cutting off of the blood-supply, and in support of this view he mentioned the case of a girl in whom a fungating mass in the mouth became so much less after ligation of the lingual artery that she was able to swallow solids easily and without pain, whereas formerly she had only been able to take liquids.

Mr. PATTISON pointed out that the improvement in his case had taken place before the arteries were tied.

Dr. PAINE replied.

PATHOLOGICAL SOCIETY OF LONDON.

Pathology of Streptothrix Infection.—Some Experiments in Reference to Immunity against Bacillus Pestis—Therapeutic Inoculation in Mediterranean Fever.

A MEETING of this society was held on April 3rd, Professor A. E. WRIGHT, Vice-President, being in the chair.

Mr. A. G. R. FOULERTON read a paper on the Pathology of Streptothrix Infections. At a laboratory meeting of the society held in 1905 he had made a preliminary communication¹ on 33 cases of streptothrix infection, and since then six more cases had been investigated. The 39 cases were classified, according to the seat of primary infection, as follows: conjunctiva, one case; infection of the tissues of the mouth, 21 cases; infection of the lung, seven cases; infection of the intestinal tract, nine cases, of which five were cases of appendicitis and four were cases of right iliac abscess probably connected with appendicitis; and there was one case of renal streptothrichosis, in which there was a history of previous lung disease of some kind. Out of the 39 patients four belonged to the "unoccupied" class and the occupation, if any, was not known in seven cases. Of the remaining 28 a considerable proportion were from the nature of their occupation specially liable to infection from grain and grasses, which had been shown to be the natural habitat of several species of streptothricæ. Thus four were either coachmen or stablemen, two were bakers, two were gardeners, and there was one dairymaid. Then there was a group of six patients—one tailor, three tailoresses, and two dressmakers—who would in the course of their occupation be in the habit of passing cotton-thread between their lips. In addition to these 15 patients there were others whose history suggested herbage as a possible source of infection. One patient had spent the summer months in the country and had been in the habit of chewing ears of barley and oats; she developed appendicitis within three months of the end of the holiday. Another patient, a young man, developed pulmonary streptothrichosis within three months of a holiday of four or five weeks spent on a farm. A third patient, a cellarmen by occupation, lived in a mews. With regard to age distribution there was nothing special to note except that there were only two children under the age of 15 years amongst the 39 patients; five cases occurred in adults whose exact age was not ascertained, ten cases occurred at ages between 15 and 25 years, ten at ages between 25 and 35 years, and the remaining 12 cases at ages 35 years and upwards. Details of the cases were then given. In all the 39 cases the presence of a streptothrix parasite was proved by microscopic examination and attempts at obtaining cultures on artificial media were made in 30. In 13 cases all attempts at obtaining cultures failed. In four cases a scanty growth was obtained in broth only and the precise species present could not be identified, and in the remaining 13 cases the parasite was obtained in pure culture on various media, so that the species could be identified. Streptothrix luteola, which Mr. Foulerton had previously described, was isolated from the case of conjunctivitis and from an abscess connected with a carious tooth. Streptothrix hominis I., a slowly growing organism which on culture media somewhat resembled bacillus tuberculosis and had also been already described, was isolated from two cases of pulmonary streptothrichosis, from two abscesses in connexion with the jaw, from a case of primary infection of the tonsil with extension to the tissues of the front of the neck, and from an abscess in the substance of the cheek. Streptothrix hominis II., an organism somewhat resembling species I., but growing rather more freely and differing in its pathogenicity for lower animals, was isolated from the case of abscess of the tongue. Streptothrix hominis III. and IV. were two distinct

¹ THE LANCET, May 6th, 1905, p. 1200.