strychnine every four hours. She died at 9.50 A.M. on the 29th.

Necropsy.—A post-mortem examination was made at noon on May 30th. The body was well nourished; there were no superficial lesions. The calvarium was of normal thickness and fairly dense; no exostosis was present. The dura mater was adherent anteriorly. The convolutions were normal with regard to size and arrangements. The pia mater peeled easily; some slight opacities were present over the sulci; otherwise the leptomeninges were normal, there being only slight increase in vascularity. The basal arteries and ventricles of the brain were normal. The mid-brain and cerebellum were normal. Vascularity of the grey and the white matter of the brain was only slightly increased. There were no focal lesions. The left ventricle of the heart was hypertrophied and the myocardium was friable; slight atheroma of the aorta was present and the aortic cusps were thickened. There was some slight congestion of both lungs. The pharynx and the larynx and trachea were very congested. Some old mechanical congestion of the liver was present and the gall-bladder was distended. The spleen and alimentary canal were normal. In both kidneys the capsule was adherent, but they were normal in other respects. The peritoneum was normal. As regards the uterus there was a polypus at the internal os and some old endometritis was present; the ovaries and tubes were normal.

Some small pieces of brain were immediately frozen and sections were stained with aniline blue-black and examined. They showed some slightly increased vascularity but nothing else was noted. A tube of blood serum was inoculated with strict antiseptic precautions with some blood from the right side of the heart, and another with cerebro-spinal fluid from the lateral ventricle. Both tubes were incubated at 35° C. On June 1st and 2nd no growth was present on either tube. On the 3rd there was a slight fine growth on the tube inoculated with the heart's blood. A film was made and a fairly long bacillus with clubbed ends was demonstrated, staining with simple stain and with Gram's method. No growth was present on the tube inoculated with cerebro-spinal fluid. On the 4th both tubes were sent up to Dr. D. N. Nabarro of University College, London, who kindly made a subculture and examined films, and reported that the growth was a pure growth of the bacillus diphtheriæ and that the tube inoculated with the cerebro-spinal fluid showed no growth at all. The medical man who certified the patient was asked if there were any diphtheria near her home. He replied: "There has been none in the immediate neighbourhood as far as I know, but plenty of it at distances varying from two to five miles away."

Remarks.—Clinically the condition is best described as acute confusional insanity. The necropsy negated dementia paralytica and acute delirious mania. The patient appears to have been the subject of toxæmia, though the precise nature of the toxic agent is obscure. The record of the mental disorder dates from the supposed attack of influenza, although it is rather remarkable that there should have been marked exacerbation of mental symptoms, without any recrudescence of the disease, from two to three months after their appearance. Again, the patient's physical condition was good (she was a well-developed, powerfully built woman), not that which one would expect to find in an individual suffering from influenza or its after-effects. The negative result of the necropsy, beyond the slightly increased vascularity of the brain-substance and the cardiac changes, was very remarkable. There was nothing in the respiratory tract to raise the suspicion of diphtheria, although certain parts were much congested.

As there had been no question of diphtheria during life no swab-preparation was made. Indeed, there was no thought of diphtheria at the necropsy and tubes were inoculated from the blood and cerebro-spinal fluid on the possibility of finding some organism which might be held accountable for the toxæmic symptoms manifested. It is a remarkable fact that such acute mental disorder should have existed with such trifling macroscopic evidence of disease in the brain and its membranes. Microscopically Nissl's method was unfortunately not used, but the aniline blue-black method showed only slightly increased vascularity.

As regards the presence of the bacillus diphtheriæ in the blood observers have pointed out that this is sometimes found in the organs (lung, liver, &c.) post mortem, and it is conjectured that the bacillus has, in such cases, passed into the blood-stream after death. This occurrence, however, is, as far as is known, very rare. The patient may have had

diphtheria, and this disease may have been the cause of her later mental symptoms. In addition to the organism in the blood there were the facts of the congestion of the upper air passages, the apparent inability to stand, and the prevalence of diphtheria in the neighbourhood of her home.

Appendix.—Some sections from the parietal region, that had been hardened in Müller's fluid and stained with Kulschitzky's hæmatoxylin solution, were examined microscopically. The tangential fibres and the superradiary were found to be scanty and degenerate.

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.

NEW HOSPITAL FOR WOMEN.

A CASE OF PLEURO-PNEUMONIA SIMULATING ABDOMINAL DISEASE.

(Under the care of Dr. JANE H. WALKER.)

WE have drawn attention elsewhere (p. 446) to the risk which exists of mistaking intrathoracic disease for a serious affection of some abdominal viscus, and in this connexion the following case is of great interest, for the history of the patient and the course of the disease pointed very clearly to gastric ulcer, yet the morbid condition present was a pneumonia with a localised pleurisy.

A board school teacher, aged 25 years, was admitted into the New Hospital for Women on May 24th, 1902, complaining of anæmia. She was in her usual health till September, 1901, when she began to grow breathless and pallid and to have swelling of the legs and abdomen, puffiness under the eyes, noises in the head, and giddiness. She had a cough and brought up some expectoration which was occasionally blood streaked. In February, 1902, she had influenza and went to Worthing for five weeks to recruit her health but came back no better. She did her work as a teacher till her admission into the hospital, but she was evidently considerably ill, being constantly sick and suffering from most obstinate constipation. On inquiring further into her past history it was ascertained that she had an attack characterised by all the symptoms of gastric ulcer six years before when she was in Charing Cross Hospital and again a second seizure of the same nature three years since. She had pleurisy as a child but no other illnesses bearing on the case.

On admission it was noted that she was very anæmic and was very well nourished, her weight having increased by 14 pounds during the past year—i.e., during the time of her increasing illness. She had hæmic bruits over the cardiac area. No abnormal signs in the lungs were detected. The temperature was 102.4° F., the pulse was 112, and the respirations were 28. The abdomen was somewhat distended but it moved fairly well. There was slight tenderness on pressure on the right side, most marked in the right iliac fossa, where there was some increased sense of resistance. The note was resonant all over and there was no dulness in the flanks. The blood count showed very considerable diminution of hæmoglobin and some decrease of blood cells and no leucocytosis.

From admission on May 24th to the 31st it was noted that the patient's temperature went up to points varying from 103° to 105°. Suddenly and unexpectedly at the same time the pulse-rate varied from 90 to 128 and the respirations from 18 to 54, neither pulse nor respiration having any direct relation to the temperature. Her chest, which was carefully examined every day, showed no abnormal signs. On June 1st, on the advice of Dr. Walker's surgical colleagues who regarded the case as probably one of abscess in the abdomen either in connexion with the appendix or tracking down from a perforated ulcer of the stomach, it was decided to make an exploratory incision. Accordingly, on

June 1st, under ether as the anæsthetic, this was done and the abdominal and pelvic viscera were carefully examined. Beyond a very small quantity of clear serous fluid in the abdominal cavity nothing abnormal was found. The right lung was percussed while the patient was anæsthetised and no dulness was found. A large exploratory needle was passed into the right pleura and a small quantity of blood was drawn off. This was subsequently examined bacteriologically and no organisms were present. On the following day impaired breath sounds were noticed at the right base and on the next day friction was heard. During the following week the patient had several attacks of breathlessness and also on several occasions the temperature reached a high level—105·8° being once noted. The signs in the chest gradually developed, giving those of a limited pleuropneumonia, some muco-purulent material being expectorated which was examined for both tubercle bacilli and other organisms with a negative result. The signs in the lung gradually cleared up and when the patient left the hospital on July 16th slight impairment of the note at the right base and prolonged expiration at the right apex were all that remained.

Remarks by Dr. WALKER.—The above case belongs to the class described by Mr. H. L. Barnard in his interesting paper published in THE LANCET of August 2nd, p. 280. It is worth recording both from its intrinsic interest as well as from the fact that it is another case of a kind where a mistaken diagnosis is not impossible, the consequences of which might be most deplorable. The case is obviously one where a correct diagnosis was extremely difficult. The symptoms and previous history of abdominal trouble, the vomiting, pain, tenderness, and localised resistance all pointed to abdominal disease. The chest signs were negative and so clearly was the possibility of chest mischief before the mind that the lungs were daily examined, but nothing abnormal was detected nor were the respirations unduly quickened.

LIVERPOOL ROYAL INFIRMARY.

TWO CASES OF "RELAPSING" GASTRIC ULCER.

(Under the care of Dr. J. HILL ABRAM and Mr. W. THELWALL THOMAS.)

THE value of surgery in intractable ulcers of the stomach and duodenum is very clearly shown by the following two cases. The tendency to cicatrization in gastric ulcers varies in different cases, but that some heal spontaneously there can be no doubt. According to Einhorn,¹ 50 per cent. of all cases of gastric ulcers heal completely without any severe complication but a large proportion require active surgical treatment.

CASE 1.—A spinster, aged 42 years, was sent to Dr. Abram by Mr. R. A. Jones of Holywell on Dec. 8th, 1900. She had always been delicate. In 1896 she had a bad attack of gastric trouble which lasted for 18 months and recurred at short intervals until October, 1900, when severe pain in the stomach and back supervened and was accompanied by vomiting. The vomited material was copious (two pints). On admission to the Liverpool Royal Infirmary she was emaciated, slept badly, and complained of headache, dizziness, and pain in the stomach. The molar teeth were greatly decayed in both upper and lower jaws. The tongue was dry and there was a constant bitter taste in the mouth. Ingestion of food caused dull aching pain in the stomach, which persisted until vomiting occurred. The vomited material was copious, smelling strongly of butyric acid. The bowels were very costive. Physical examination of the abdomen revealed marked tenderness in the epigastrium, a dilated stomach extending well below the umbilicus, and an *irregular* flattish mass in the upper right quadrant of the abdomen. The urine was scanty and alkaline (fixed alkali). With routine treatment the patient improved to such an extent that from Dec. 14th to Jan. 3rd there was no vomiting and, in fact, the patient considered herself well. However, Dr. Abram considered that an operation was advisable and the patient was transferred to the care of Mr. Thelwall Thomas in January, 1901. On opening the abdomen a mass of adhesions was found in the pyloric region

which were covering a duodenal ulcer lying just beyond the pyloric ring and so situated anatomically that excision was impracticable. The surface of the ulcer was scraped and pyloroplasty was performed. She made an uninterrupted recovery and had remained free from any gastric symptoms up to the time she was last seen (July, 1902) and there is now no trace of dilatation of the stomach.

CASE 2.—The patient was a nurse, aged 26 years. The first gastric symptom, vomiting, occurred in February, 1899, and was definitely associated with mental shock. Food caused discomfort but not actual pain. After a month's rest no symptoms appeared for seven months. From this time (October, 1899) constipation was marked and slight pain after food was frequent. In March, 1900, Dr. Abram saw her for a severe attack of pain in the epigastrium with a slight degree of collapse. Mr. Thelwall Thomas saw the case with him, and it was decided that perforation in the general cavity of the peritoneum had not occurred and that immediate operation was not indicated. On May 8th she left the infirmary practically free from all symptoms and during a three months' holiday could golf and cycle. After returning to duty she had occasional attacks of colicky pain. In November, 1901, she had a septic throat and, as the temperature fell, a severe attack of abdominal pain came on. Dr. Abram was now able to detect a lump in the epigastrium lying to the left of the middle line. Although by careful dieting and attention to the bowels this patient could be kept free from pain, yet she was always in danger of a relapse, and, moreover, was off duty nine months in three years—a serious matter to a nurse. Dr. Caton also saw the patient and agreed as to operation. Mr. Thelwall Thomas operated in December, 1901. There was a dense mass of adhesions, covering an ulcer of the stomach. The ulcer lay on the lesser curvature, rather nearer the cardiac than the pyloric end of the stomach. The ulcer and adhesions were excised. The patient made a good recovery from the operation and has remained well up to the time of writing (August, 1902).

Remarks by Dr. ABRAM.—I wish to record these two cases because I believe physicians will have to consider the question of surgical interference in cases of chronic gastric ulcer, or, as they might well be called, "relapsing" gastric ulcer. I should like to emphasise the fact that in both these cases relief was obtained by ordinary treatment, and yet in Case 1 life was becoming a burden and in Case 2 the repeated relapses were seriously interfering with the patient's training as a nurse. In Case 2 the adhesion were extremely dense, and, in fact, Mr. Thomas thought that he had a tumour to deal with. Subsequent microscopical examination by Dr. E. E. Glynn showed, however, simply scar tissue. Although not tumour, the adhesions were so tough that their removal was most difficult, and it would have been in my opinion absolutely hopeless to interfere successfully for an acute perforation. It seems to me, therefore, that surgical intervention should be invoked during a quiescent period. Finally, the term which I have suggested for these cases—viz., "relapsing"—needs a word or two of comment. The cicatrization of a true gastric ulcer is a much rarer thing, in my opinion, than is commonly believed. I have no note of such a condition post mortem, and the pathologist to the infirmary, Dr. Glynn, has only found one in a hundred cases in which the stomachs were specially treated, and any cicatrix could have been readily detected. Many writers on gastric ulcer hold that the cicatrices are overlooked, hence Dr. Glynn's experience is important. From the history of the above two cases it is obvious that the symptoms may all disappear and yet the ulcer has not cicatrised, it has merely become callous. The cause of relapse is obscure: errors of diet, and so on, account for some cases, but Case 2 is of interest, for in this instance a severe relapse attended, or rather followed, a septic throat, and it may well be that infection has much to do with relapses. This, again, emphasises the necessity for most rigorous attention to the state of the mouth in all cases of gastric ulcer.

VACCINATION GRANT.—Mr. J. Chestnutt, B.A., public vaccinator for Howden, East Yorkshire, has for the second time been awarded the special grant for the efficient state of vaccination in his district.

¹ Quoted by Robson and Moynihan, Diseases of the Stomach and their Surgical Treatment, p. 100.