in early, a point of some diagnostic importance, and is usually profuse, the hair and nails being sometimes shed. The pathology is obscure. Brocq is inclined to regard the affection as a general exfoliative dermatitis. The etiology is also uncertain. Many of the cases appear to be idiopathic and to depend upon predisposition; the attacks then tend to recur. Amongst the causes that have been given are: (1) septicaemia and pyaemia; (2) specific fevers—e.g., variola and typhoid fever; (3) rheumatism, ague, chronic Bright's disease; (4) sewer gas poisoning (Crocker); and (5) drug manifestations. The disease is to be distinguished from scarlet fever by the absence of throat symptoms, by the disproportion between the intensity of the eruption and the amount of pyrexia, by the absence of the "circum-oral ring," and by the early onset of desquamation. When there is a history of recurrent attacks, as in the present case, the diagnosis should be easy. The prognosis in idiopathic cases is favourable. In other cases it will depend upon the associated cause. The treatment must be on general principles, but is unsatisfactory. Arsenic is to be avoided.

Burton-on-Trent.

NEUTRAL RED AS A MEANS OF DETECTING THE PRESENCE OF THE BACILLUS COLI COMMUNIS IN WATER-SUPPLIES.

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(From the Bacteriological Laboratory, London Hospital.)

QUITE recently I showed¹ that the use of neutral red as suggested by Rothberger afforded a reliable method of distinguishing the bacillus coli communis from the bacillus typhosus, and further, that it was possible to diagnose by means of this method with certainty the presence of the bacillus coli communis in the majority of fluids within from 12 to 24 hours. At my suggestion Dr. Makgill has made some experiments with the object of finding whether this reaction affords a means of detecting the bacillus coli communis in water-supplies and of estimating thereby the number of bacilli present. The following is a summary of the results obtained.

Media containing neutral red form an extremely delicate test for the presence of the bacillus coli communis. This is most marked in the case of peptone bouillon in which the presence of one or two bacilli will produce a reaction within 24 hours if other micro-organisms are excluded. In water containing the ordinary varieties of aquatic micro-organisms the reaction is delayed unless comparatively large numbers of the bacillus coli communis are present. Thus, if a cubic centimetre of unsterilised tap-water, containing from 10 to 20 bacilli coli per cubic centimetre, were mixed with the neutral red bouillon, a reaction would be present in 24 hours, but if the bacilli numbered only from three to four per cubic centimetre their presence might not be shown until the second day had been completed. By noting such differences in time as varying amounts of the water to be examined require, a fairly accurate idea of the proportions of the bacillus coli present can be gained. By making shake cultures with one or two cubic centimetres of water in neutral red glucose agar, and incubating at 37° C. for two or three days, the bacillus coli can be detected and can be readily isolated when present in extremely small numbers. The reaction in broth has so far proved to be specific. In glucose agar, however—i.e., under anaerobic conditions—the bacillus tetani and the bacillus maligni oedematis produce a reaction similar to that of the bacillus coli communis. Notwithstanding this fact the value of the reaction in regard to the presence of the bacillus coli communis in water-supplies is scarcely affected. Dr. Makgill intends to publish soon the results of his experiments more in detail.

London Hospital, E.

A NOTE ON THE CONCURRENCE OF MEASLES AND DIPHThERIA.

BY J. D. RAWLINGS, M.B. LOND., &c.,
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ONE or two cases of the somewhat unusual combination of measles and diphtheria having been recently published in

¹ THE LANCET, March 2nd, 1901, p. 613.

THE LANCET the notes of the following case which came into my hands in 1895 at St. Bartholomew's Hospital may interest some of your readers.

The patient, a child, aged 13 months, was admitted into the hospital for laryngeal obstruction. She was quite well till a week before, when she developed a cough. This continued till the day of admission when it became croupy and the breathing was noisy. On the day before there were a little discharge from the nose and redness of the eyes. There was no history of exposure to the infection of diphtheria. Two children in the house where the patient lived had had measles a fortnight before. The patient never had measles or any other illness. On admission the child was not very ill and was not cyanosed. The breathing was stridulous, but the signs of laryngeal obstruction were not very great—indeed, tracheotomy never became necessary. The respirations were 40. There was slight inspiratory recession of the lower costal cartilages and epigastrium; the sterno-mastoids and scaleni were working. The temperature was 102·8° F. and the pulse was 160, of smaller volume during inspiration than during expiration. There was no rash. General dry bronchitis existed, but there were no signs of pneumonia. There was nothing abnormal in the fauces and there was little or no enlargement of the glands at the angles of the jaw. The urine showed a thick cloud of albumin. There was very slight injection of the conjunctivæ. The diagnosis was important as I had to decide at once whether to admit the child to the diphtheria ward or not. I decided to do so. On the next morning the child had a measles rash, and the pathologist reported that diphtheria bacilli had grown from the swab. The little patient died three days after admission. Post mortem, flakes of diphtheritic membrane were found in the larynx and trachea and there was extensive broncho-pneumonia in both lungs.

The case is interesting chiefly from the point of view of diagnosis. The recognition of the diphtheria was due to the quantity of albumin in the urine and to the fact that the signs of laryngeal obstruction, although not great, were more than are generally found in the catarrh of uncomplicated measles. These mixed cases of measles and diphtheria in young children are almost always fatal, and I think Mr. W. Wylls is to be congratulated on the favourable result in the case which he has published.¹

Dorking.

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.

ST. MARY'S HOSPITAL.

A CASE OF SUBPHRENIC AND SPLENIC ABSCESS;
OPERATION; RECOVERY.

(Under the care of Dr. W. B. CHEADLE and
Mr. H. STANSFIELD COLLIER.)

THE etiology of sub-diaphragmatic abscesses is frequently very obscure, but it is fairly certain that in most of the cases the abscess is connected with a perforation of the stomach, duodenum, or some other portion of the bowel. Dr. Lee Dickinson in a paper read before the Pathological Society in 1895² referred to a case of subphrenic abscess which resulted from a duodenal ulcer. Occasionally it may follow an appendicitis, but the abscess then is generally on the left side of the body. For the notes of the case we are indebted to Dr. H. J. Van Praagh, house physician.

A domestic servant, aged 19 years, was admitted into the Alexandra Ward of St. Mary's Hospital on Oct. 20th, 1900, under the care of Dr. Cheadle, suffering from pain in the chest and shortness of breath. The patient had been quite well on the 18th, but on the evening of that date, whilst stooping at her work she was suddenly seized with

¹ THE LANCET, Feb. 23rd, 1901, p. 549.

² THE LANCET, April 6th, 1895, p. 874.

pain in the left side which gradually grew worse until she was compelled to take to her bed. On the following day she had pain between the shoulders, across the chest, and down the left side; she was feverish and perspired considerably; she did not vomit, nor did she complain of pain in the abdomen. At this time she was seen by a medical man who found that she was suffering from pleurisy and sent her to the hospital. The personal history showed that two years previously she had suffered from pain after food, with occasional vomiting, but no hæmatemesis. She had had no dyspeptic symptoms recently.

On admission the patient was dyspnoic and complained of pain in the left side, which was made worse by breathing deeply. The temperature was 102° F., the pulse was 144, and the respirations were 36. On examination there were signs of consolidation at the base of the left lung, accompanied by a considerable amount of pleurisy. There was also fluid in the left pleural cavity, the heart being displaced two finger-breadths to the right. On abdominal examination the stomach was found to be somewhat dilated; the edge of the spleen was not palpable. There was no evidence of peritonitis, nor was there anything in the physical signs to suggest the presence of a gastric ulcer. The patient had been for some time past the subject of constipation. The heart-sounds were normal and very frequent. The urine was normal.

For the first week in the hospital there was no improvement in the condition of the patient, the pulse-rate remaining high, ranging from 110 to 136, and the pyrexia increasing until on Oct. 27th it attained to 104°. The physical signs did not vary from those present at the time of the admission of the patient to the hospital, except that there seemed to be evidence of the presence of a greater quantity of fluid in the left pleural cavity. As she became much more dyspnoic paracentesis pleuræ (mid-axillary line, sixth space) was performed and 20 ounces of clear fluid were withdrawn. With the removal of the fluid the dyspnoea became less, the temperature chart showing a fall from 104° to 100°, but the physical examination of the left chest did not show any diminution in the extent of the dullness and the tubular breathing became much louder than before. The temperature now went up again, the patient's general condition becoming worse, the pyrexia being of a remittent character accompanied by profuse sweating. On Nov. 3rd, at 6 P.M. the temperature rose to 104.8° and the pulse to 150, although the signs of consolidation were becoming less marked. The patient's condition was so strongly suggestive of suppuration that an exploring needle was introduced into the position of greatest dullness, which was in the tenth space, in the posterior scapular line, and some foetid pus was evacuated.

Mr. H. Stansfield Collier, who was called by Dr. Cheadle to see the case, decided on immediate operation. The patient was anaesthetised with chloroform and the pus having been once more located by means of an exploratory needle an incision was made along the lower border of the eighth rib and a portion of the ninth rib was resected, when on inserting a director about two ounces of very foul pus flowed out. As there was some doubt as to the site of the abscess cavity the incision was prolonged backwards for about two inches and more rib was excised. After this the pus was found to come from beneath the diaphragm, especially from a cavity in the spleen substance, the director having traversed the muscular attachments of the diaphragm. The pleural cavity was also found to contain a few ounces of clear fluid which were drawn off. A large drainage-tube was inserted and the patient was put back to bed. For some days after the operation the temperature ranged between 101° and 105° and the pulse ran constantly up to 150; the wound remained in an extremely septic condition, the walls of the cavity being lined with grey sloughs. The pus was very foul, and it was found that the diaphragm, which had been stitched up to the thoracic wall during the operation, had given way, forming a communication between the pleural and abscess cavities. It was found necessary to have a tube draining each cavity, the wound being gently washed out twice daily with weak iodine solution, after which sloughs came away and the wound commenced to granulate.

The patient's condition still remained very critical, and a highly stimulant treatment was found necessary. For the next ten days the general toxæmic symptoms showed no signs of abatement, and on the evening of Nov. 14th, after the wound had been dressed, she was seized with a sudden

violent pain in the right side, causing a syncopal attack of great severity. There was a loud friction rub to be heard all over the base of the right chest; an ice-bag was applied and the friction rub disappeared in the course of ten days. There were never at any time any physical signs to suggest the presence of fluid. The patient seemed to get worse every day, excepting that she took all her nourishment exceedingly well and kept in remarkably good spirits. On the evening of Nov. 16th, she appeared to get much worse, being very dyspnoic and cyanosed. She had a rigor, the temperature at the time being 102.5°, and the pulse 190 and very small. During the night she had frequent inhalations of oxygen; champagne and brandy were given by the mouth, and strychnine was hypodermically injected. She gradually recovered from that time, having no further rigors and the toxæmic manifestations slowly retrograding. The local condition of the wound daily improved, and after several weeks of careful nursing and dieting, the temperature became normal, the pulse-rate and general condition corresponding favourably. For the last two or three weeks she had been taking ordinary food, and got up for the greater part of the day. The wound is closed except for a very small sinus, the left lung is expanding rapidly, and in the course of a few days the patient will be able to leave the hospital.

Remarks by Dr. VAN PRAAGH.—This case presents many points of exceptional interest. Splenic abscess is by no means a common condition, and it is stated to be most frequently caused by a perforation of a gastric or intestinal ulcer; in this case there was nothing either in the history, the symptoms, or the physical signs to suggest the presence of either; nor was there any local sepsis, adjacent or remote, which could have acted as an exciting cause. The diagnosis was rendered difficult in that the presence of fluid and consolidation at the base of the left chest appeared quite sufficient to account for the symptoms observed. The small size of the abscess rendered it exceedingly difficult of detection and the convalescence was much prolonged by the sloughing of the diaphragm, which caused the abscess cavity to come into direct communication with the pleural cavity. A notable point in the case was the extreme foulness of the abscess, and on account of this the cavity was irrigated with iodine solution and, I feel sure, with marked benefit. The slough separated and the cavity became much cleaner after this was done. The patient's symptoms were extremely acute after the operation, the pulse-rate especially being a great source of apprehension; it seldom went below 150 and I often counted it 180. There was also evidence of infection on the right side, but no fluid collected and the extensive friction rub disappeared within ten days. As regards the medical treatment of the case it consisted in the free use of stimulants and unremitting attention from the nurses.

I have to thank Dr. Cheadle and Mr. Collier for permission to publish this case.

BEDFORD COUNTY HOSPITAL.

TWO CASES OF SUPPURATIVE APPENDICITIS WITH SEPTICÆMIA; RECOVERY OF ONE PATIENT AFTER THE USE OF ANTI-STREPTOCOCCIC SERUM.

(Under the care of Mr. W. GIFFORD NASH.)

EACH of the following two cases illustrates well the extensive septic infection that may occur in appendicitis. In the first case a septic phlebitis occurred in some of the radicles of the mesenteric veins and the infected emboli from these gave rise to the pyæmic abscesses in the liver. In the second case the chief septic complications of the appendicitis were local abscesses. The administration of anti-streptococcic serum in this second case was followed by the recovery of the patient, but data are wanting to enable us to determine whether the serum was active in bringing about this recovery. Anti-streptococcic serum may be administered in cases of true septicæmia—that is to say, cases in which the streptococci have entered the blood-stream or in cases in which only sapræmia is present, when only the products of the organisms have been absorbed. In the latter group of cases it is very doubtful if any improvement could be looked for after the injection of anti-streptococcic serum, as the serum has no effect on the toxins. In cases of true septicæmia before we can expect any benefit from the use of the serum it should be ascertained that streptococci are present in the blood. For if the septicæmia is due to staphylococci no benefit can