from the first, and we should keep our suspicion alive until repeated examinations for the spirochaete have yielded a succession of negative results. Theoretically the spirochaete ought to be discoverable from the time of inoculation. Practically it is readily discovered in an untreated sore within a day or two of its appearance. Even in a sore that has been dressed constantly with antiseptics, patience and repeated examinations will sooner or later reveal it. As the time factor is of incalculable importance in the treatment of syphilis, much misery, serious ill health, and possibly tragedy, may be avoided if the diagnosis is established early.

Method of Taking Serum for Examination.

Wherever possible the serum should be taken by the pathologist who is to examine it. But if this cannot be done the procedure to be adopted is as follows:

Cleanse the sore with a pledget of wool soaked in normal saline. Then gently abrade the edge of the sore with the edge, not the point, of a bayonet-shaped needle. Rub the abraded edge briskly with a pledget of wool soaked in methylated spirit. After a short interval serum will be found exuding from the abraded surface. This serum may be wiped away, and if there is no further flow, it may be excited by a further application of spirit. This second issue of serum should be collected in capillary tubes, and sent at once to a laboratory for examination. If the report is negative, a further sample should be examined forty-eight hours later. Care should be taken to send clear serum, and not that which is copiously admixed with blood corpuscles. Three consecutive negative reports are not likely to be contradicted by the subsequent history of the case; but anything short of three negative examinations should not be regarded as sufficient to put syphilis out of court.

Cases.

I will quote three cases:

I.

A nursing sister on overseas duty in Malta developed a sore on the back of the proximal phalanx of the left thumb in the beginning of the third week of May, 1916. The sore was diagnosed as a poisoned sand-fly bite and dressed with an antiseptic dressing. She proceeded on duty to Salonica, reaching her destination on June 6th. On arrival she reported sick with a sore throat. She was isolated on the suspicion that she was suffering from diphtheria, but swabs were taken and yielded negative results both as to the presence of the Klebs-Loeffler bacillus, and the spirillum of Vincent's angina. The following week she developed an abscess in the neck in front of the sterno-mastoid on the right side. This would lead one to imagine that the mischief in her throat at this stage, if specific at all, was complicated by a mixed infection, as suppuration in the neck is an extremely rare outcome of syphilitic tonsillitis in the secondary stage. The abscess was opened on June 20th, 1916. At this time there was no eruption on her body, and, so far as she can remember, she did not call the attention of anyone at Salonica to the sore on the thumb.

At the end of June she was transferred to Malta to convalesce after the operation, and either on the voyage or immediately after her arrival in Malta she broke out in a copious eruption. This was diagnosed as multiple sand-fly bites, and was treated with zinc ointment and a tonic. She was feeling weak and ill, and on reporting this she was admitted into hospital as a case of debility due to sand-fly bites. So far as she is aware, not one of the five medical officers who saw her in Malta suspected syphilis, and she received no treatment for that disease. As she did not improve she was boarded, and sent home on six weeks' sick leave. On arriving in London she was again boarded, as is the custom in the Army Nursing Service, and at this board, for the first time, one of the medical officers suggested the possibility of syphilis. A blood test was made, and yielded a strongly positive reaction, and she came under antisyphilitic treatment for the first time at the end of September. She has not yet recovered her full health, and her left eye is irreparably damaged. One cannot but think that the course of her illness would have been more satisfactory if the original sore on the thumb had been examined for the spirochaete in May, 1916.

II.

In the first week of June, 1919, a dental surgeon developed a small sore on the left index finger, just beyond the base of the nail. It steadily and progressively increased in size, but remained shallow, and at no stage in its evolution showed induration. The sore was carefully treated by a doctor, who very early suspected syphilis, but who hesitated to commit himself to the diagnosis of a specific infection in the absence of any induration. But as he was dissatisfied with the progress of the case he took his patient to a surgeon, who suggested that a blood test be made. Blood was taken for that purpose, but while the result was being waited for a faint macular eruption appeared on the patient's trunk, and his doctor referred him to me.

I found that he had an indolent sore a little larger than a sixpenny piece on the left index finger, general adenitis of a typical character, and a very faint roseolar rash was beginning to appear on his body. Although on clinical evidences alone there could now be no doubt as to the diagnosis, for my own

satisfaction I had some of the serum from the sore examined by dark-ground illumination, and in spite of the fact that the chancre had all along been dressed with an antiseptic dressing, typical spirochaetes were found without difficulty.

III.

The third case is that of a medical man who developed an abrasion over the middle phalanx of the left little finger early in August of this year, and about the same time a second abrasion on the web between the bases of the ring and little fingers of that hand. He believes that he pricked himself with a needle in the course of an operation. However that may be, these sores were at that time, or soon afterwards, inoculated with the spirochaete, but at the same time with a somewhat virulent pus organism, probably a streptococcus, which set up violent inflammation in the finger and severe lymphangitis, which extended up to the glands in the left axilla. The mixed infection effectually masked the true nature of the condition. After some weeks of treatment the inflammation in the finger and the lymphangitis in the arm began to subside, but the sore on the finger showed no signs of healing.

On October 4th he consulted Mr. Paul, who kindly sent him to me. I found the finger greatly swollen and inflamed, the skin over it tight and glazed, and the digit presenting the appearance of an over-filled sausage. Over the middle of the second phalanx was an open sore about the size of a sixpence, shallow, definitely margined, covered with weak-looking granulations, and with only a small quantity of discharge. No induration could be felt. Running up the forearm, and extending half-way to the elbow, was a red line of inflamed lymphatics. The epitrochlear gland and the glands in the left axilla were swollen, as were also the glands behind both sterno-mastoid muscles. In spite of the fact that the finger had been constantly dressed with antiseptics, serum taken from the abraded edge of the sore and examined by Burri's method showed many spirochaetes. Eight hours after I first saw him a roseolar eruption broke out on the body and limbs.

Here, again, valuable time had been lost, and the mischief had reached the threshold of the secondary stage before the cause was discovered. It is in the hope of making such unfortunate delays less frequent that I have written this note, and, in conclusion, I would reiterate this opinion, that a syphilitic primary sore on the finger rarely, if ever, shows "characteristic" induration, and never if it is secondarily infected. The path of wisdom is an early examination for the spirochaete.

SEVERE DERMATITIS DURING TREATMENT WITH NOVARSENOBILLON.

BY

L. G. LEONARD, M.R.C.S., L.R.C.P.,

DERMATOLOGIST ATTACHED NEW BRIDGE STREET MILITARY HOSPITAL;
CONSULTING DERMATOLOGIST, NELL LANE MILITARY HOSPITAL,
MANCHESTER.

THE following case is instructive as an illustration of the risks attending the use of novarsenobillon:

Pte. J. M., aged 23, was admitted to New Bridge Street Military Hospital, Manchester, on July 24th, 1919, suffering from secondary syphilis; the secondary lesions were a well developed macular syphilide and general adenitis. The Wassermann reaction was strongly positive. The primary sore, contracted four months previously, had partially healed. The skin was normal and there was no history of skin disease.

Treatment was commenced the following day, and three injections of 0.45 gram novarsenobillon intravenously and 1 grain of mercury intramuscularly were given at weekly intervals. All the injections were well tolerated; there was no reaction, and a gain in weight of 2 lb. was recorded. All primary and secondary lesions cleared up, and he was made an out-patient, the usual fortnight's rest being allowed.

On August 23rd 0.6 gram novarsenobillon and 1 grain of mercury were given. There was no immediate reaction either complained of or noted. On August 25th, two days after the last injection, he reported sick, with shivering, headache, pain in the back, and diarrhoea. The temperature was 99.2°. These symptoms continued, and on August 27th the temperature was 102.2°. Sodium salicylate and quinine were given, and by August 31st all symptoms, including the rise in temperature, had subsided and the patient was apparently well again.

On September 1st, nine days after the last injection, the temperature suddenly rose in the evening to 105°, with a return of headache and backache. The next day the temperature was 104.4°, and he was covered with "an erythematous rash of an urticarial character over the whole body" (extract from notes by M.O.). No change in rash or general condition was noted on September 3rd, and next day he was transferred to New Bridge Street Military Hospital, where and when I first saw him. The temperature was 105°, pulse 130. The tongue was coated with a thick brown fur, and there was frequent retching with vomiting of bile-stained fluid. He complained of severe headache, backache, epigastric pain, intense burning of the skin, and of feeling very ill generally. The face, neck, scalp, and forearms were thickly covered with a maculo-papular eruption,

resembling severe measles, with areas of fully developed urticaria between the macules. The backs of the wrists and hands were a mass of large discrete papules. The papules on the scalp were already pustular. The rest of the skin of the body was covered with an intense erythematous rash, scarlatiniform in character but of a darker red colour; scattered over the back and legs were islands of unaffected skin, thus differing from the uniform blush of a true scarlatina. The ears were very swollen with inflammatory oedema, and bathed with a profuse watery exudation which hung on to the lobes and helices in large drops. The conjunctivae were injected, lachrymation and photophobia being very distressing. The fauces were congested. There was a very marked general adenitis, the axillary glands being as large as pigeon's eggs and very tender. A moderate amount of albumin was present in the urine.

On September 5th the temperature was 104°, and the vomiting was relieved, but otherwise the condition was about the same. On September 6th the temperature was 101°; he was much improved, and the rash less pronounced. On September 8th the temperature was 99°; the whole face was much swollen and oedematous, the eyelids so much so that the eyes could not be opened and appeared as mere slits. The scalp was pustular. On September 9th the temperature was 102.8°, and the exudation from the face profuse; the rest of the body scaly.

On September 11th he had severe diarrhoea (ten motions during the night). The temperature was 100° F. On September 13th the face was much improved. From the rest of the body there was abundant desquamation of branny flakes and scales of large size; the exposed skin being smooth and pink, with the dull glazed appearance so peculiar to these cases.

On September 14th the temperature was 100°, and an extensive papulo-pustular eruption suddenly developed on the chest, abdomen, back, and forearms. This eruption was pustular at the onset. On September 16th diarrhoea was very severe (thirteen motions during the night). A small bed sore developed on the right hip, and there was inguinal adenitis. On September 24th the face was dry and scaling and the rest of the body almost clear.

A moist papular eruption appeared on the lower abdomen, but on October 8th the skin was almost clear, with the exception of the scalp, which was covered with a mass of thick dry silvery scales very difficult to remove. There was neither atrophy nor infiltration of the skin, the only remains of the dermatitis being a very faint brown pigmentation.

On October 16th yellowness of the conjunctivae was quickly followed by general icterus. The urine was acid and bile-stained, but contained no albumin. The stools were paler than normal, but not typical clay-coloured. Gastric symptoms were absent, and nothing was complained of beyond occasional headache.

The jaundice had cleared on October 28th and recovery was quite complete.

A blood test on October 8th gave a negative Wassermann reaction. In spite of the severity of his illness the patient's general condition remained good throughout; the loss of weight was 1 lb. only.

Treatment in the acute weeping stage consisted of applications of lint soaked with a lead-zinc oxide and starch lotion previously warmed; it was changed as often as the lint became dry. An ointment of similar composition was substituted when the exudation dried up; any relapse from dryness to moisture was dealt with by prompt recourse to the lotion. Daily warm baths were very soothing; sodium bicarbonate was added to the water. A mixture of potassium citrate and antimonial wine was given three times a day.

A strict diet of warm milk, milk and soda, with large quantities of barley water, was given in the acute stage. Eggs and meat extracts were avoided at all times.

The points of interest in this case appear to be:

1. The occurrence of so severe a dermatitis and toxæmia after the administration of only 1.9 grams of nov-arsenobillon.

2. The high temperature recorded—105° F.

3. The simultaneous occurrence of three distinct types of eruption—maculo-papular, scarlatiniform, and urticarial.

4. The marked general adenitis at the onset, present before the lesions, other than the scalp, had become pustular.

5. The negative Wassermann reaction of October 8th; that on July 24th, before treatment commenced, being strongly positive.

Colonel Harrison, Officer Commanding Rochester Row, commenting on arsenical dermatitis in general and on this case in particular, expressed the opinion that it is by no means the severity of the skin affection which determines the prognosis; his idea is that the skin is a sort of reflex of the intestinal and lung alveolar linings, and that with a mild dermatitis there may be severe internal complications with disastrous results, and vice versa. Reflecting on my own experience of past cases this conclusion seems to be very true.

I beg to thank Lieut.-Colonel Smith, R.A.M.C., Officer Commanding New Bridge Street Military Hospital, for kind permission to publish this case.

PREGNANCY COMPLICATED BY VOLVULUS OF THE SIGMOID FLEXURE, CAUSING INTESTINAL OBSTRUCTION.

BY

MALCOLM DONALDSON, F.R.C.S.,

OBSTETRIC PHYSICIAN, GREAT NORTHERN HOSPITAL; TEMPORARY
ASSISTANT PHYSICIAN-ACCUCHEUR, ST. BARTHOLOMEW'S
HOSPITAL.

The following case is of sufficient interest to warrant publication, on account of its rarity:

The patient, aged 36, was in the thirty-seventh week of her first pregnancy. There was nothing of importance in her past history, except that she had always suffered from constipation; and nothing abnormal occurred during the pregnancy until October 16th, when the patient states that she slipped in the street, recovered herself without actually falling, had a pain in her side, and thought she had strained a muscle. Three days later she sought medical advice, as the bowels had not acted since the above incident.

Her doctor stated that when he saw her she had intermittent pain, and he therefore examined her to see if labour had started. No evidence of uterine contraction or dilatation of the cervix was found; and he treated her with aperients and enemata without, however, any result, and no flatus was passed.

Two days later my colleague, Dr. Barris, was consulted; he diagnosed intestinal obstruction, and sent her into the maternity ward, St. Bartholomew's Hospital, of which I then had charge. The patient did not look very ill; the temperature and pulse were normal and there was no vomiting. She had all the signs of pregnancy, but, in addition, the abdomen was very much distended, especially in the upper half. The whole abdomen was tender; the upper part of the uterus was to some extent obscured by the distended bowels, and the whole organ much displaced to the left. The fetus was found to be in the L.O.A. position, and no obstruction could be felt in the pelvis, either by vaginal or rectal examination. I decided to operate at once, and opened the abdomen.

A small quantity of free fluid was found, which proved to be sterile. It was quite impossible to examine the intestines before emptying the uterus, so I performed Caesarean section, and after this was complete, kept the uterus well out of the abdomen whilst examining the intestines.

The pelvic colon, the transverse colon, together with a large loop of small intestine, were found to be much distended. Further investigation showed a volvulus of the sigmoid flexure, involving also a large loop of small intestine. The volvulus consisted of one and a half twists, but was not sufficiently tight to have caused any gangrene of the intestine. After untwisting the bowel, I spent a considerable time in emptying the colon through a rectal tube, as I was very anxious not to open the bowel. By this time the anaesthetist considered the patient's condition was critical, so I closed the abdomen without anchoring the colon to the abdominal parietes. The operation lasted forty minutes. The patient and the baby made an uneventful recovery.

On looking up the literature, I find an account of 8 cases collected by Dr. Lampe, and published in the *Monatsschrift für Geburtshilfe und Gynäkologie*, vol. 29, 1909. Of these, 2 only recovered, 6 having been operated upon; the other 2 died without operation. Another case is reported by Dr. Schmidt in 1914 (*Medical Review*, Bergen), and in this case recovery took place.

THE Washington University School of Medicine, St. Louis, has been granted £30,000 by the General Education Board on condition that an equal amount is raised by subscription. This fund of £60,000 is to be applied to the endowment of the department of pharmacology.