found to be the only one that has yielded positive results. It is for this reason that I wish to bring forward the results which I have recently obtained by employing a slight modification in the strength and method of using Leishman's stain.

A patient suffering from syphilis recently attended the out-patient department of St. Thomas's Hospital. I succeeded in obtaining a large quantity of fluid from a condyloma situated in the region of the anus by using severe local pressure. A number of cover-slip preparations of the exudate were made and these were stained as follows. I used a sample of Leishman's stain, such as I employ for staining bacteria. 1. A few drops of a 1 per cent. solution of Leishman's powder (Grübler) in absolute methylic alcohol (Kahlbaum's) were poured on to the surface of the film preparation, just sufficient to cover completely the whole of the cover-slip. This was allowed to fix the specimen and to stain it for 30 minutes. 2. Double the volume of distilled water as to stain was now run on to the surface of the cover-slip and the stain and water were carefully mixed. The staining was further continued for five minutes. 3. The diluted stain was poured off and distilled water was run on the cover slip and allowed to remain on for one minute. 4. Surplus stain and any precipitate were now removed by squirting some distilled water on to the film from a pipette. 5. The film was then dried with cigarette paper and mounted in Canada balsam.

I obtained excellent preparations of the organism by means of the above process and was able to observe a large number of spirochætæ in most of the film preparations; the organisms could be recognised quite distinctly, however, by staining according to Leishman's own method. Its morphological characteristics corresponded to the type described by Dr. Schaudinn and Dr. Hoffmann as the spirochæta pallida. It was found to be extremely delicate, but perhaps the most noticeable point concerning this organism is the typical corkscrew arrangement; in some cases from 10 to 15 spiral turns were seen. Each spiral was also found to be defined very sharply. Some spirochætæ, however, were thicker, showed polar staining with Leishman's stain, and did not have the typical corkscrew characters of the spirochæta pallida. This type probably belongs to that described by the above-mentioned authorities as the spirochæta refringens.

It is quite possible that with a little trouble still better results can be obtained with Leishman's stain, which has already been shown to be one of the most valuable stains in use at the present day.

Note.—Since the above account was written further results have been obtained with film preparations of the exudate from "mucous patches" in a case of secondary syphilis, under the care of Mr. P. W. G. Sargent.

St. Thomas's Hospital, S.E.

TWO CASES OF ADDISON'S DISEASE AND THE EFFECT OF THE ADMINISTRATION OF SUPRARENAL EXTRACT.[1]

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As the effect of the administration of suprarenal extract in the treatment of Addison's disease is still *sub judice* I think that the results obtained by the administration of this drug in two cases of that disease which have recently been under my care will be of interest.

CASE 1.—The patient, aged 18 years, was admitted into the Stanley Hospital on Sept. 7th, 1903, complaining of pains in the epigastrium, vomiting, and weakness. His pulse was extremely small and his face was sallow. There was no history of phthisis or tubercle in his family. The lad stated that he had always been healthy up to the time of the present illness, which began, according to him, two months prior to admission, when he was troubled with severe aching pains in the epigastrium following food but these were relieved by vomiting after each meal. He said that he had lost flesh during his illness and had become very weak; he also noticed that "his skin was yellow."

On admission the patient was found to be a thin but well-developed youth; his face and hands were cold and livid and the temperature was subnormal at from 97° to 98° F. There was a large amount of pigmentation of the skin over the body, but it was especially marked in certain regions—namely, *in the exposed parts*, the neck as far as the collar where it ended abruptly, and the back of the forearms where it gradually shaded off; *in the normal sites* there was deep pigmentation of the axillæ, the nipples, the penis, and the scrotum; and *in the parts exposed to pressure*, the lumbar region of the back, especially the lumbar spines, about the knees, the soles of the feet, and also in two scars on the back of the left forearm. The pigmentation was of a yellowish-brown or copper tint, shading in some regions to a dark brown and reaching a maximum in some small black pigmented spots scattered about the chin, the lips, the back, and the ankles. There was also some copper-coloured mottling on the mucous membrane of the cheeks and gums. There was tenderness in the epigastrium and left hypochondrium on deep pressure, and a distinctly tender spot was found over the eleventh and twelfth ribs posteriorly on each side (three inches from the spine on the right and two and a half inches on the left). The pulse was 80 per minute, extremely small and of very low tension but regular. At no time could a sphygmographic tracing be obtained. The cardiac impulse was absent. There was no superficial dulness and the deep dulness only extended three inches to the left. The heart sounds were clear at all areas but distant. Liver dulness was four inches in the nipple line. Splenic dulness was normal. The patient had no cough and the respirations were 20 per minute, otherwise normal. The urine was acid, scanty, high-coloured, contained urates on standing, and a trace of albumin sometimes. The quantity of urea was relatively greatly increased. The muscular system was flabby but there was not much wasting.

Our first care was to stop the persistent vomiting, so the patient was placed on a very light diet and ten grains of bismuth carbonate were given just before food, with the desired effect for a time. On Sept. 14th extract of suprarenal in five-grain doses was given thrice daily and this was increased to ten grains a few days later. On Oct. 2nd the suprarenal extract was increased to 15 grains and the patient had improved. He had no pain and had not been sick for a week and his pulse was a little stronger. This improvement was maintained until the 19th but he was steadily losing weight, about two pounds per week, and the pigmentation in the mouth was more marked. On that date the vomiting returned with all its severity; he complained of acute pain in the abdomen and in both lumbar regions, pressure under the last rib on each side causing him to jump and cry out. The pain was so intense on the 22nd that he lay curled up in bed groaning; he was very sick and all medicines had to be stopped; hypodermic injections of morphine were given to relieve the pain, and some brandy. The muscular weakness was most pronounced at this time and the deep cardiac dulness was found to have further diminished. The patient gradually became semi-conscious and died on Oct. 25th.

The post-mortem examination was made on the same day and the report is briefly as follows. The body was extremely emaciated, there being marked pigmentation of the skin as noted during life. The lungs were healthy and there was no evidence of tubercle recent or old. The heart was small, the muscle substance being atrophied, pale, and friable; the valves were healthy. The stomach was large and somewhat congested; the bowels were healthy. There was considerable matting of chronic inflammatory tissue in front of the aorta round the cœliac axis and affecting the cœliac plexus, the semilunar ganglia, the terminations of the greater and lesser splanchnic nerves, and extending outward to the suprarenal bodies. Both suprarenal glands were very much enlarged, nodular on the surface, and hard; on section both glands showed numerous caseous and fibrous nodules varying in size from five to 15 millimetres in diameter.

CASE 2.—The patient was a married woman, aged 32 years. It was ascertained that one brother had died from pulmonary tuberculosis. The patient had had eight children, six of whom were alive. With regard to the other two children, one had died from meningitis and the other from diarrhœa. The present illness began two years previously when she

[1] Notes on these cases were read by Dr. Gullan at the Liverpool Medical Institution on Feb. 16th, 1905, when he also showed the second patient.

was, she stated, getting thin, low spirited, and continually fainting; she also had had great pain in both lumbar regions, particularly in the left. As she had a severe attack of vomiting in January, 1904, she applied to the Stanley Hospital and was admitted. She was then noticed to have slight bronzing of the lower half of the face and neck. Her pulse was very small and easily compressible, and she had marked tenderness over both suprarenal bodies. There was general lassitude and her temperature was frequently subnormal, occasionally falling to 97° F. The tongue was coated, the bowels were rather constipated, and vomiting was troublesome. She was placed on light diet and calcium chloride and tincture of nux vomica were prescribed. After three weeks she became an out-patient and has remained so ever since, having been re-admitted, however, on two occasions (i.e., in March and August, 1904). Up to the latter date her condition became worse, the pigmentation was more marked on the face and neck, and also appeared on the backs of the forearms and on the hard palate; she was also more subject to syncopal attacks. On August 5th she was ordered five grains of suprarenal extract four times a day, and this was increased to ten grains and then to 20 grains thrice daily. This treatment was continued up to Dec. 9th with considerable benefit; she lost her lassitude to a great extent, had no fainting attack, her pulse was stronger, she vomited much less frequently, and the tenderness over the suprarenals was not so marked. She also gained in weight. On Dec. 9th she was confined and had a normal and easy labour, the child being healthy. She was then absent from the out-patient department for three weeks and consequently the suprarenal extract was omitted for that time and it is an interesting fact that the symptoms from which she had been free—i.e., fainting, vomiting, and general lassitude—all gradually returned. On Jan. 2nd, 1905, the suprarenal extract was recommenced and the above symptoms steadily abated. She has been taking from 20 to 30 grains of the extract regularly up to the present time with great benefit. On another occasion, however, in April, she had a mild attack of bronchitis when it was omitted for a short period whilst some expectorant treatment was given and then her former symptoms returned and the pigmentation increased. These diminished when she took the extract again. She is now in fair health, has gained in weight, and only on occasions is troubled by vomiting or a syncopal attack, but we notice that if she omits the suprarenal extract for only a few days through not coming to the hospital her pulse is always much weaker and her symptoms aggravated. This case, in the benefit she has derived from suprarenal extract given by the mouth, agrees with the two cases reported by Dr. G. Oliver[2] (though the bronzing has not improved to the extent which appears to have been apparent in his second case), and also with that recorded by Dr. H. D. Rolleston[3] in his admirable Goulstonian lectures. It also illustrates how the treatment must be continued, as laid down by Dr. Rolleston[4] and also that the suprarenal extract must be given in large doses. Dr. E. Lloyd Jones records a case of Addison's disease[5] which was cured by taking 12 tabloids per diem—my patient is taking 18 tabloids per diem.

The special points of interest in these cases are the following: 1. The severity and rapid progress of the disease in Case 1, though the lesion was that of chronic tuberculosis of the suprarenal bodies plus secondary inflammation of the neighbouring sympathetic, and the little benefit derived from the extract. 2. The chronicity of the symptoms in Case 2 and the considerable benefit derived from the suprarenal extract, so that she even easily stood the strain of pregnancy and parturition. These cases certainly lead me to support Dr. Byrom Bramwell's view[6] that those cases which improve on this form of treatment may be due to adrenal inadequacy alone and the remainder are due to an additional lesion (I should like to word it a secondary lesion) of the neighbouring sympathetic. This was the condition in Case 1. But I cannot agree with Dr. Bramwell's suggestion that all those cases which improve have a non-tuberculous lesion (though some of them may have, as the one recorded by him), for it seems quite logical that in the early stage of Addison's disease when of an undoubtedly tuberculous nature (and personally I have not yet seen a case post mortem in which the condition was not of a chronic tuberculous nature) the disorder starts in the adrenal body and may lead to inadequacy of that body before the sympathetic plexuses are involved. At such a stage I believe treatment by suprarenal extract would be most beneficial and if combined with good wholesome diet, fresh air, &c., the disease may be checked or cured; but then if there remains as a result sclerosis of the adrenal bodies the suprarenal extract would have to be continued to supply the internal secretion of the organ probably for the rest of the patient's life. Hence the great importance of early diagnosis and an early trial of this form of treatment in Addison's disease.

Liverpool.

[2] Pulse Gauging, p. 89; Brit. Med. Jour., 1895, vol. ii., p. 654.
[3] Brit. Med. Jour., 1895, vol. i., p. 748.
[4] Allbutt's System of Medicine, vol. iv., p. 586.
[5] Brit. Med. Jour., 1895, vol. ii., p. 483.
[6] Brit. Med. Jour., 1897, vol. i., p. 71.

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., Procemium.

MARGATE COTTAGE HOSPITAL.

A CASE OF RUPTURED URETHRA AND EXTRAVASATION OF URINE OF FOUR DAYS' STANDING.

(Under the care of Mr. W. GREENWOOD SUTCLIFFE.)

THE accident occurred during a storm in the Bay of Biscay on March 8th of this year; the patient, a Swedish sailor, 35 years of age, was thrown violently, his perineum struck a projecting beam, and he was picked up practically unconscious. The steamer, a homeward-bound eastern trader, carried no surgeon, and beyond getting the man to his bunk the captain could do little for him. A large swelling rapidly developed in the perineum, the scrotum, and the cellular tissue of the penis; there was inability to pass urine and the condition of the patient on his arrival at Margate on March 12th, four days after the injury, was one of extreme exhaustion and collapse. Several attempts at landing him had been made during the voyage up Channel but the weather was too severe to permit it and even here the transfer of the patient was only effected by means of the lifeboat. Dr. C. J. Harnett, who had previously reached the steamer in a smaller boat, superintended the removal and on admission to the hospital the case came under the care of Mr. Sutcliffe. The bladder was found to be distended above the umbilicus, the skin over the left side of the perineum and the inner side of the left thigh was black and gangrenous, and the scrotum and penis were greatly swollen and black but firm and not crackling to the touch. The right side of the perineum was only gangrenous for about an inch outwards to the thigh and the skin of the right thigh was unaffected. The skin over the left thigh outside the area of the gangrenous patch, itself at least six inches square, was of a dusky red hue and the whole thigh down to the knee was tense and swollen. The urethra had obviously been ruptured in the membranous portion as no extravasation had spread forwards into the scrotal tissues or on to the abdomen; the posterior layer of the triangular ligament had probably itself been torn, as most of the urine had found a way into the left ischio-rectal fossa near the rectum and anus and into the subcutaneous tissue of the left thigh. The patient was anæsthetised and put in the lithotomy position; the perineum was incised freely in the middle line and large quantities of clot and infiltrated débris were cleared away; a director was then passed through the rent in the urethra into the bladder and some 50 or more ounces of clear urine were evacuated. Free incisions were then made over the infiltrated area, the gangrenous skin over the inner side of the thigh was cut away, and a large rubber catheter was tied in the bladder through the perineal wound.

Recovery began at once, the patient, a man of fine physique, rapidly passing out of danger. The separation of sloughs was assisted by soaking the patient in a hot bath for several hours daily and the catheter was retained in the