can take long walks and cycle rides without getting blown," which speaks well for her cardiac condition. I have omitted the details of her treatment as the chief interest of the case, and its claim to be recorded lies in the unusual severity and persistence of the rheumatic invasion as shown by the sequelae. The associations between rheumatic fever, chorea, iritis, and endocarditis are well recognized, but it is rare for these complications to occur consecutively in one patient. I may add that the child had never previously suffered from rheumatism in any of its manifestations, and the only point of note in her family history was that a maternal aunt had had chorea as a child.

BRIGHT'S DISEASE: ANURIA: INTESTINAL HAEMORRHAGE: DEATH.

By Lyster Cole-Baker, M.D.,
Assistant Physician, Royal Portsmouth Hospital.

THE following case is of interest from its suddenness, the difficulty of diagnosis, and the confusing symptoms.

Miss B., aged 43, unmarried, had previously enjoyed good health, except that she occasionally, perhaps, had felt more tired than could be accounted for by the amount of exercise taken, and except for an attack of meningitis six years previously. On November 1st, 1901, she went to see H.M.S. *Ophir* come in, standing in an exposed position on the top of a building in the dockyard for some three hours. Next day she went for a bicycle ride of about twelve miles, and after a rather heavy meal went to bed at 11 p.m. At 12.30 a.m. she woke up in great pain in the abdomen, and vomited two or three times. I was sent for, and saw her at 4 a.m. She then complained of great pain in the epigastrium, just beneath the xiphoid cartilage, and on palpation there was distinct tenderness. Her pulse was normal, and temperature slightly subnormal—98°. In a basin beside the bed was some mucus tinged with bile which she had brought up. I injected morph. hydrochlor. gr. $\frac{1}{2}$ hypodermically, and, as her condition improved, left her. During November 3rd she was still in pain, though not so severe, located in the same place; the vomiting had ceased. She had a feeling of nausea, so was kept on water and ice all day. The pulse and temperature were as on the previous night. Calomel gr. v was given twice at intervals of six hours.

On November 4th I saw her at 10 a.m., when the pain had shifted, and was referred to the hypogastric region between the pubes and umbilicus. I was told she had not passed urine for twenty-four hours, and on palpation a distinct tumour could be felt, pressure causing great tenderness and pain. On percussion this tumour was dull, with very pronounced resonance above and in both flanks, presenting in a most remarkable manner all the symptoms and signs of a full bladder. On passing a catheter, however, no urine was obtained, although four different ones were tried. Per vaginam the bladder was felt to be empty, the uterus and tubes and ovaries normal. Therefore one had to come to the conclusion that the kidneys had ceased to secrete. A hot bath was ordered. I saw her almost immediately after it, and then her condition had changed very seriously. She was very cold; the lips, nose, and finger tips were blue or livid. Her breathing was very rapid, 46; her pulse could not be felt at the wrist. In fact she was moribund, and died an hour afterwards. Ether and strychnine had been injected hypodermically, champagne administered by the mouth, and she had been entirely enveloped in blankets and surrounded with hot bottles.

Necropsy.—On opening the abdomen in the hypogastric region there was a coil of intestine, livid or plum-coloured, 4 ft. in length. This was found filled with dark-coloured blood, 2 pints in quantity. The mesentery for the whole length of this part of the intestine was of the same colour as the intestine, swollen to a thickness of 1 to 1½ in. On cutting into the mesentery, it was found to have all its meshes filled with blood clot; there was about 1½ pint of bloody fluid in the peritoneal cavity. The kidneys were enlarged and heavy, presenting the typical characteristics of large white kidney. All the rest of the abdominal organs were normal and healthy, and all the rest of the intestine was of a pale pink colour. There was no strangulation or twisting of the intestine, and no point could be found from which the bleeding had occurred.

Among other points of interest are the following:

1. Death occurred forty hours after the onset of pain.
2. The pain in the epigastric region was the only prominent symptom for about thirty hours. Pain in this region is so very common, no matter where the lesion, that its occurrence is of little help in diagnosis. I have myself noticed that pain has been located there on the onset of perforating gastric ulcer, perforation of the appendix, simple appendicitis, and hepatitis; in fact, so common is it that one is tempted to neglect it entirely in trying to arrive at a diagnosis.
3. The patient had passed water on November 3rd. On November 4th she complained that she had not passed any for twenty-four hours and was suffering from pain in the region of the bladder. The coil of intestine filled with blood lying in the hypogastric region gave all the subjective and objective symptoms of a full bladder; indeed, I venture to say that, had such a case occurred in a male subject into

whose bladder there was difficulty in passing a catheter from stricture or false passage, one would have been sorely tempted to try suprapubic aspiration.

My interpretation of this case is that the severe cold on November 1st, combined with the bicycle ride on November 2nd, caused the kidneys to cease secreting, or almost so, and that the increased blood pressure in consequence caused rupture of a small intramesenteric vessel, which blood slowly oozed and clotted as it flowed, till the bath on November 4th, when the collapse set in from excessive haemorrhage. The urine voided on November 3rd was, I think, secreted some time on November 2nd, previous to the rupture of the vessel.

4. It was impossible to diagnose the anuria till six hours before death, and when diagnosed there was no urgency or gravity in the case.

5. Remedial measures for the anuria only aggravated the bleeding and precipitated the end.

DIABETIC COMA TREATED BY TRANSFUSION.

By David Young, M.B. Edin.,
Late House-Physician, Edinburgh Royal Infirmary.

SINCE Studelmann recommended the treatment of diabetic coma by alkalies administered intravenously, several recoveries have been recorded. In the case to which I refer the temporary improvement after transfusion was very marked, and it appeared as if the patient would be tided over his attack of coma, till pericarditis supervened, and apparently closed the scene.

History.

J. McW., aged 39, was admitted to the Edinburgh Royal Infirmary on June 11th, 1902, suffering from diabetes of nearly three years' duration. He had been treated in Glasgow Royal Infirmary in 1899, and again in 1901. On each occasion he improved, but relapsed after leaving the institution. Three weeks before admission to the infirmary he restarted work as an ironmonger, and this appeared to lead to his symptoms becoming aggravated.

Condition on Admission.

On admission, patient was put on ordinary diet, and no drug administered, in order that his condition might be observed before active treatment was commenced. The day after admission he passed 136 fluid ounces of urine containing 310 grams of sugar. No diacetic acid was present.

Treatment.

On the morning of June 13th he complained of pain in the abdomen relieved by fomentations, and headache. He was sick after dinner, and at 7 p.m. complained of lightness in the head. An enema and purgative were ordered, also sod. bicarb. 5j every three hours, and diuretin gr. xv. four times daily. At 9 p.m. he was becoming drowsy, and had vomited twice. Breathing was noisy, and the breath had a sweetish odour. The urine contained diacetic acid and had fallen for the day to 31xxx, and the sugar to 200 grams. The case at this time appeared to be one of diabetic coma, progressing rapidly.

On June 14th, at 1 a.m., he was very drowsy, and could be roused only with difficulty. The pulse was 130 and the respirations 26. I then injected 3xxx normal saline solution intravenously after withdrawing 3viii blood from the same vein. Two hours later he had revived to a remarkable extent but said his head felt light. He was able to answer questions intelligently but did not remember anything about the transfusion: the pulse 102 and the respirations 22. At 11 a.m. he felt better and had taken a fair breakfast. During the day he was seen by Dr. Byrom Bramwell, in whose ward he was, and to whose kindness I am indebted for permission to publish these notes. Dr. Bramwell confirmed the diagnosis and approved of the treatment. At 4 p.m. he was again tending to become drowsy. He bled to 3v, and 3xxx saline solution again injected. At 10 p.m. he was quite conscious.

On June 15th, in the morning, he looked better than on the previous day. The pulse was 93 and the respirations 20. At 5 p.m. the pulse was feeble and he was again transfused with 3xx of sterile fluid made to the following formula (from *Tirard's Medical Treatment*): Sodium chloride, 93 gr.; liquor sodii 20 drops; water, 2 pints. An hour later his pulse indicated the beneficial result. Potassium citrate was ordered instead of the sodium bicarbonate, as the latter appeared to be causing flatulence.

He again received 3xx of the above solution intravenously on June 16th. There was no diacetic acid in the urine.

On June 17th he was much better, asked to be allowed to get up, and was able to write a letter in the afternoon. He was not drowsy, breathing was quiet, and the breath had no peculiar odour. On the following afternoon he was drowsy and sick twice. He was transfused, 3xxx being given.

On June 19th he was sick three times, and was again transfused 3xxx. He had headache on the following morning, but was not sick. A hot vapour bath was given, but he did not sweat till he had been in one hour. He was then left in ten minutes. Later he was transfused, receiving 3xxx.

On June 21st his condition had improved, and he looked brighter. He said he had not felt better since admission to hospital, and asked for