parietes, and much blood-stained bile below and above the right lobe of the liver. The adhesions were separated with great difficulty. The gall bladder was empty and had perforated on its lower surface. Although the foramen of Winslow was defined it was impossible to palpate the common bile duct to decide if there were any stones in it, owing to the great inflammatory oedema of the subperitoneal tissues and of the head of the pancreas. A small stone was felt in the cystic duct, and this was extracted with difficulty, after opening the duct. No more could be felt. The common bile duct was opened and a large olive-headed probe was passed into the duodenum and up into both right and left bile ducts without difficulty and without encountering any stone.

Although the patient was very ill it was felt that he would not remain well unless the gall bladder was removed. This was done with difficulty, owing to adhesions and inflammatory changes about the ducts which made it difficult to define them. When the gall bladder had been removed another small stone was found in the cystic duct. This was a great surprise. The common bile duct was drained and the patient made a good and rapid recovery. He has remained quite well since.

CASE II.

Mrs. H., aged 49. There was a history of repeated attacks of hepatic colic, without jaundice, since 1917. Cholecystostomy was performed elsewhere in November, 1919, and seventy-two stones removed. The patient remained well until February, 1922, when attacks of very severe pain recurred at frequent intervals, each attack lasting from half an hour to three hours. There was no jaundice.

Operation (March 15th, 1922).—Cholecystectomy performed. There were no gall stones, but a greatly enlarged, folded, inflamed, and adherent gall bladder containing mucus and bile. A chronically inflamed appendix was also removed. The patient made a good recovery.

CASE III.

Mrs. K., aged 64, had had cholecystostomy performed elsewhere in 1914. In 1916 the attacks of biliary colic recurred, and during the next six years she had six severe and many minor attacks. They were attended by nausea, vomiting, and flatulent distension.

Operation (May 25th, 1922).—Cholecystectomy performed. The gall bladder was found to be full of stones, and several were also removed from the common bile duct. The patient did very well.

A CASE OF HAEMOCHROMATOSIS.

BY

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I VENTURE to publish this short account of a case of haemochromatosis for three reasons: (1) It was possible to obtain a fairly accurate clinical history of the patient's previous illnesses and of the onset of the fatal disease. (2) The clinical data observed during the last stages were interesting. (3) It seems to me that the case opens up new ground in connexion with this somewhat rare disease.

G. H., a man aged 42, was brought up on a farm, and was one of a large and healthy family. As a child he had a severe attack of scarlet fever, followed by acute haemorrhagic nephritis, which completely cleared up. At the age of 25 he was athletic, well developed, and active physically and mentally. He was appointed works manager in a large engineering firm at the age of 27. His complexion was always sallow (olive), and this colour was universally distributed over the whole skin. On one occasion, fifteen years ago, whilst bathing, this discoloration of the skin was markedly noticeable and was joked about. Five years ago, at a large daylight meeting in a neighbouring town, his doctor, who was acting as door-keeper, on looking up at the gallery noticed his patient's face stand out as a greenish-yellow blotch amongst all the others. His health remained fairly good, except for occasional attacks of dyspepsia, which were characterized by sleepiness and heaviness in the morning, but as far as I can gather were not accompanied by abdominal pain or vomiting. On one occasion calomel was prescribed and acted with extraordinary vigour.

In 1916 an abscess developed on the dorsum of the right foot. This was followed by other abscesses in various parts of the body, and finally by a prostatic abscess, which burst into the rectum. *Bacillus coli* was found to be the causative organism, and he was treated by vaccines, which did not, however, prevent other abscesses developing. The discoloration of the skin varied in depth according to his general health, becoming much lighter after a month's holiday. It may be mentioned that he always took "Fellows' syrup" as a tonic when he felt run down, but I have no data as to the effects of this substance upon the pigmentation of the skin.

In December, 1921, he first consulted me because he felt tired after exercise, and had insomnia, and cramps in the legs. Examination showed nothing abnormal, except that the liver extended $1\frac{1}{2}$ inches below the costal margin, the edge being hard and well defined. The spleen was not palpable. It was easy to examine the abdomen as the muscles were not at all rigid. The urine contained 7 per cent. sugar, but no albumin, acetone, or diaceto-acetic acid. He was gradually dieted down to meat, eggs, green vegetables, butter, and 4 oz. of bread daily; but the urine

still contained about 7 per cent. sugar, and the quantity was 5 pints daily. He then went to an institution for treatment, where he stayed about three months. The report on admission was as follows: "Height 5 ft. 11½ in. Weight 11 st. 2 lb. Pale, thin, and tired-looking. Pulse 68. Systolic blood pressure 114 mm. Hg. Blood 90 per cent. Hb; red cells 4,450,000 and white cells 3,200 per c.mm.; blood sugar, 0.34 per cent. Faeces normal. Urine (twenty-four hours) 2,856 c.cm.; specific gravity 1035, acid, sugar 157 grams, traces of acetone and aceto-acetic acid. Albumin, a faint trace." The fat was restricted and followed by a two days' fast in bed; a little protein was then allowed for three days, followed by another fast for two days. After the second fast the urine was sugar-free. Food was then allowed, starting with proteins only. Glycosuria returned with 80 grams protein, 3 grams carbohydrate, and 3 grams of fat. The diet was gradually increased, the fat and carbohydrates being kept low and a fast day instituted once a week. On this régime the sugar in the urine fell to a trace on the fast day, rising to 100 grams by the end of the week. The blood sugar fell to 0.19 per cent. during the fasting; subsequently it varied between 0.24 and 0.40 per cent. There was no appearance of acetone or aceto-acetic acid. On leaving the institution his weight was 9 st. 10½ lb., a loss of 19½ lb. His thirst had almost gone, and he felt stronger. When he returned home his teeth, antra, and sinuses were examined, but no septic foci were discovered.

In April, 1922, the liver was markedly enlarged, to the level of the umbilicus, hard, with signs of lobulation in the epigastric area. The spleen was easily palpable. From this time until his death in June, 1922, the urine was repeatedly examined for acetone and aceto-acetic acid, but the result was always negative, despite the fact that for the last two or three weeks he was in a semi-comatose condition. During this time darkish pigmentation appeared, chiefly round the elbows and on the hands. The following diet and urine chart may be of interest:

	Carbo- hydrate.	Protein.	Fat.	Urine.
	Grams.	Grams.	Grams.	
April 6th	30	198	42	6½ pints; 2.8% sugar.
April 18th	42	201	54	7½ " 5% "
May 12th	14	186	19	7 " 6% "

He was now allowed 40 grams of white bread daily, and later this was increased to 60 grams, together with 5 oz. of milk. After the semi-comatose condition was established he practically lived upon skimmed milk and soda-water. He became gradually weaker, and died from exhaustion on June 8th. He was quite conscious just before his death.

A complete *post-mortem* examination was out of the question, but a portion of skin from the back of the hand was examined and showed a well-marked reaction for iron. The dark pigmentation was most marked over the backs of the hands, the elbows, and shins, and on the genital organs.

I desire to thank Dr. J. Orton of Coventry and Dr. A. P. Thomson of Birmingham for their valuable help in writing this short record of the case.

I would draw attention to several points in this case which strike me as being particularly interesting.

1. Did the attack of nephritis in childhood, which cleared up, have anything to do with the subsequent disease? Could it have left the kidney uninjured except for difficulty in excreting iron?

2. The fact that the patient's colour altered considerably at different periods appears to show that if this disease is due to loss of renal excretion of iron, then the loss is not total.

3. Although in a semi-comatose condition with a glycosuria of 7 per cent., there was no sign of aceto-acetic acid or acetone in the urine. I think we may presume that the pancreas was almost totally destroyed; if so, then there must be some other unknown cause for the presence of acetone in the urine of ordinary diabetics.

4. Cases of haemochromatosis are probably more common than we think, and could be diagnosed at an early stage after the peculiar colouring of the skin has become noticeable. I have no doubt that careful dieting would enable them to live for longer periods, and useful lives might be prolonged.

THE late Mr. A. D. Serena, of York Terrace, Regent's Park, who left net personalty of £374,214, bequeathed £10,000 free of duty to the London Hospital. After paying certain legacies the remainder of the estate is to be divided among some forty-four charities, including the following hospitals: London, Charing Cross, King's College, Guy's, Middlesex, University College, Royal Free, St. Bartholomew's, St. George's, St. Thomas's, St. Mary's, Royal Northern, Royal Hospital for Incurables, Poplar Hospital for Accidentals, Hospital for Consumption and Diseases of the Chest, Fulham Road, Cancer, Chelsea Hospital for Women, Queen Charlotte's Lying-in, Hospital for Sick Children, Great Ormond Street, Lock Hospital, Harrow Road, and the Italian.