PERNICIOUS ANAEMIA IN AN ASIATIC

BY

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Pernicious anaemia has hitherto been unknown in the Asiatic. I have certainly not been able to find any reference to any such case in the literature, nor have I met with a single such instance of the disease before. It is remarkable, on the other hand, that another blood disease, leukaemia, is by no means uncommon. In my own wards no fewer than half a dozen cases of the latter were seen during the course of last year. This opinion is also shared by Dr. Brunel Hawes, professor of medicine at the Singapore School of Medicine, who saw my patient on a recent visit of his to this hospital.

CASE RECORD

The patient, a female Sinhalese, aged 55, was admitted to the General Hospital, Colombo, under my care on July 17th last. She answered to the three great criteria necessary for an accurate diagnosis of true Addisonian anaemia—namely, (1) the absence of free HCl in the stomach contents of every specimen of a fractional test meal, (2) a positive indirect van den Bergh reaction, and (3) megalocytosis with a raised colour index.

The Price-Jones curve, as furnished me by the laboratory attached to this institution, is given below. It shows the definite shift to the right, and is characteristic.

CHART 1.

History and Symptomatology

The symptoms for which the patient sought admission to hospital were: dyspnoea of two years' duration, with palpitation on the slightest exertion, a feeling of lassitude, headache, sleeplessness, and loss of appetite. The onset of her illness had further been marked by vomiting and discomfort in the abdomen. Latterly the sense of extreme weakness and exhaustion, with a progressive pallor of her tongue and conjunctivae, were so marked that her life was despaired of, and she was brought by her brother for admission to my ward as a last resource. Inquiry, however, revealed the fact that there had been a previous admission to hospital nine months before for the same symptoms, and that she had on that occasion been given a course of six intravenous injections of neosalvarsan, because of a positive Wassermann reaction in her blood. She denied any possibility of a venereal taint, however. Her blood, on examination, gave an anti-complementary result at first, but on being retested a month later, without the administration of any arsenical medication, proved to be definitely negative to the Wassermann test.

Physical and Laboratory Findings

She was a fairly well nourished subject, although she stated that there had been some loss of weight. The dark-complexioned skin was of a lemon-olive tint. The tongue was large, flabby, and absolutely bloodless. She was practically edentulous, with only half a dozen septic stumps. The conjunctivae were colourless. The heart was slightly dilated, with a soft, blowing systolic murmur at the apex; the lungs were healthy. The liver was not enlarged; the spleen was just palpable. In spite of the severe grade of anaemia there was, as will be seen presently, no indication whatever of any involvement of the nervous system. Her blood count on the third day of her stay in hospital was: red blood cells, 800,000; white blood cells, 3,800; haemoglobin percentage, 18; colour index, 1.1. Differential count, polymorphonuclears 48 per cent., lymphocytes 52 per cent.

No nucleated reds were seen in the blood film, but there was marked poikilocytosis and anisocytosis, as well as polychromatophilia. Malarial parasites were not found in the blood, nor was there a history of past infection. The stools were consistently negative to the ova of the ankylostome. Her temperature was occasionally febrile during the first three weeks of her stay in hospital. Pulse 76, of poor volume and tension.

Treatment and Progress

Ten days later, on the thirteenth day of her stay, the blood count was: red blood cells, 500,000; haemoglobin percentage 10.

No reticulocytes were seen in the blood film stained by cresyl-blue. The only treatment she had had in the interval was a mixture of ferri et ammon. cit., and half a dozen injections of cacodylate of soda. Treatment for pernicious anaemia was begun on the same day—that is, on the thirteenth day after admission, with intravenous injections of liver extract P.A.F. On the fifth day following, the reticulocytes had risen to 6.1 per cent. of the total red blood cells. This was the peak of the rise—a poor response indeed. By the end of the ninth week of treatment these were no longer present, however, none being seen in a count of 1,000 cells. The number of erythrocytes and the percentage of haemoglobin showed, on the other hand, a steady rise throughout the period of observation. Her diet consisted of rice, fresh vegetables, beef, and fruit.

The treatment adopted and its effect on her blood picture is shown in the table below.

Date	R.B.C. in millions	Hb Percentage	Reticulocyte Percentage	Treatment
19/7/33	800,000	18	Nil	Ferri et ammon. cit. mixt. orally; six injections cacodylate of soda subcutaneously
29/7/33	500,000	10	Nil	Six injections hepatex P.A.F. intravenously
3/8/33	1,320,000	30	6.1	Hepatex with iron orally for ten days—that is, the equivalent of 1,000 grams daily of fresh liver
12/8/33	1,400,000	38	5.0	Six injections hepatex P.A.F. intravenously
18/8/33	1,500,000	40	3.0	Ten intramuscular injections of campolon; septic stumps extracted from jaws
28/8/33	2,160,000	52	3.5	Five intramuscular injections of campolon; hepatex with iron by mouth—the equivalent of 1,000 grams daily
2/9/33	2,400,000	53	1.0	Three intramuscular injections of campolon and hepatex with iron by mouth as before
10/9/33	3,000,000	60	0.6	Three intravenous injections of hepatex P.A.F., as well as hepatex with iron by mouth in the usual dosage
17/9/33	3,000,000	60	0.6	Six intramuscular injections of campolon and hepatex with iron orally
24/9/33	*3,200,000	60	0.8	Three intramuscular injections of campolon and hepatex with iron by mouth, the equivalent of 665 grams daily
1/10/33	3,600,000	65	Nil in 1,000 R.B.C.	Hepatex by mouth, the equivalent of 665 grams daily

* The colour index was below 1 for the first time.

The patient left hospital three days later, having gained 20 lb. in weight during the last month of her stay.

Chart 2 shows the definite progress in the condition of the patient with no relapse for the period of nine and a half weeks during which she was treated for pernicious anaemia.

CHART 2.

DISCUSSION

The maintenance dose necessary to keep her well could not be correctly determined, as the patient left hospital a few days later after a stay of eleven weeks. She was then looking quite fit, felt strong and well, and had gained considerably in weight, as already mentioned. Her tongue

was of a normal rose tint. She was asked to continue taking a dessertful of hepatex twice a day, which was the quantity she had been given during the last week of her stay, without any setback.

The most noteworthy feature of the case was, however, the slow response to treatment. While it is held that an active preparation of liver extract will induce a rise in the reticulocyte percentage to a maximum of between 30 and 70 per cent. within seven to twelve days of commencing treatment, the peak in her case corresponded to an increase of only 6.1, while it required intensive treatment for a little over two months to bring her blood picture to anything like a satisfactory condition.

The idea naturally arises in one's mind that preparations of liver extract, whether for enteral or parenteral administration, are prone to deteriorate in the Tropics to a great extent.

The positive Wassermann reaction of the patient's blood on her first admission to hospital was evidently a false positive, due to some unknown factor in the blood, as suggested by L. S. P. Davidson, who has noticed such a false positive in several cases of grave anaemia.

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Clinical Memoranda

A CASE OF CONVULSIONS AFTER ETHER ANAESTHESIA

The following is a case of ether convulsions occurring in this hospital, which I feel is worthy of record, as it shows a further possible line of treatment.

CASE HISTORY

A girl aged 11 was admitted to the Queen's Hospital, Birmingham, on October 1st, 1933. She had been ill for four days with abdominal pain, vomiting, and sore throat. The pain commenced in the epigastrium and localized in the right iliac fossa, while it was colicky in nature. There was no evidence of any epileptic tendency in the patient's personal or family history. When examined she was obviously very toxic, the throat being inflamed and the tongue dirty. The temperature was 103°F. , the pulse rate 120, and the respiration rate 25. The whole abdomen was rigid, and the tenderness was most marked over McBurney's point.

After a hypodermic injection of 1/75 grain of atropine she was anaesthetized with ethyl chloride, followed by open ether. The induction, which commenced at 3.55 p.m., was quiet and the anaesthetic satisfactory, the patient being kept in the middle of the third stage throughout the operation. Pelvic peritonitis was present and the appendix was retro-caecal, while the wall of the caecum around the appendix base was swollen, oedematous, and in a state of cellulitis. Some of the mesenteric glands were enlarged. At 4.30 p.m., just as the peritoneum had been closed and the anaesthetic withdrawn, she began to develop convulsions. These commenced in the right foot and leg, rapidly becoming generalized. The face became cyanosed and the conjunctivae congested. Her head was raised and oxygen was administered. It was evident that all peripheral stimulation, such as even the needle-pricks as the surgeon was sewing up, started convulsions. The operation was therefore concluded as rapidly as possible, and all interference produced by active attempts to resuscitate the patient was stopped, even the stream of oxygen being discontinued. Then, within a few minutes, the convulsions became less violent, and soon ceased. No further fits occurred, and she made an uneventful recovery.

The main feature of this case appears to be the almost immediate cessation of the convulsions on suspension of

active treatment, and this suggests a course which can be further tried in other cases such as this.

In conclusion, I should like to thank Mr. Hugh Donovan, F.R.C.S., under whose care this patient was, for permission to publish these notes.

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MYOMA OF TRANSVERSE COLON

The following case may be of interest to readers on account of the rather rare tumour that was found on laparotomy.

A man, aged 54, was being measured for a truss when it was seen that he had a large lump in the abdomen. The patient had noticed an increase in his abdominal girth during the previous five or six months, but as he had suffered no symptoms he had not thought it necessary to apply for advice.

On examination a large, fairly well defined mass was felt in the centre of the abdomen, partly occupying the epigastric and umbilical regions. It was not freely movable, and remained fixed on respiration. It was dull on percussion, and felt very solid, so much so that at first it was thought to be an enlarged spleen, but the blood picture was normal.

Laparotomy was performed on August 16th, 1933. A tumour surrounding the middle of the transverse colon was found, embedded in omentum, with coils of small bowel adherent to it. These latter were easily separated, and the tumour, with the enclosed piece of colon, was removed. Recovery was uninterrupted.

The pathologist's report described the specimen as a large lobulated myoma measuring $7\frac{1}{2}$ by $5\frac{1}{2}$ by 5 inches. A section made longitudinally through the attached colon shows that the tumour arises from the circular muscular coat of the bowel. Microscopical section shows the growth to be a leiomyoma. It consists of interlacing fasciculi of smooth muscle cells. There is no suggestion of any malignant change.

I am indebted to Dr. Lawrence, pathologist at the Museum of the Royal College of Surgeons, where the specimen is being preserved, for his report, of which the above is an extract.

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