Clinical and other Notes.

A CLINICAL NOTE ON TWO CASES OF KALA AZAR TREATED WITH SALVARSAN.

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Case 1. W. T., a boy aged 1 year and 7 months, was brought to the Military Families Hospital, Valetta, as his parents had noticed that for some time past he had been getting very weak and pale, losing flesh, and did not take his food well. They did not keep any dogs in their quarters.

On admission (April 16, 1911), he was intensely anaemic, his conjunctiva were blanched and colourless, and his skin was "café au lait" coloured. Examination of the chest revealed nothing abnormal. Examination of the abdomen revealed enlargement of the spleen and the liver. The spleen occupied the left hypochondriac, the left half of the epigastric, and the upper portion of the left lumbar and umbilical regions, and extended for about three fingers breadth below the costal margin. His temperature on admission was 102.4 F.

A provisional diagnosis of kala azar was made.

He was ordered bone marrow in addition to his ordinary diet, and was given cod-liver-oil and malt, and infusion of senega. For the first eight days (April 16-23), his temperature ranged from normal to 102.4 at night, and his pulse varied from 140-160, and the respirations between 38-48. His general condition appeared to be gradually getting worse, he was very listless, did not play with his toys, could not sit up without help, and was soon tired; he slept most of his time. He took his food moderately well, but was often sick after it (probably owing to the excess of fat in the food). The condition of his spleen remained much the same.

On April 14 his temperature fell to normal, and remained so until he was discharged from hospital. On April 23, it was decided to try the effect of salvarsan. His weight then was 19 lb. 3½ oz., his differential white blood corpuscle count was: polynuclears, 28.2 per cent; small mononuclears, 59.0 per cent; large mononuclears, 18.8 per cent; Myelocytes 2.3 per cent. His spleen measured 2½ in. below the costal margin in the left mammary line, and its edge felt thick and sodden.

Under chloroform and ether anaesthesia a liver puncture was made, and the smears were examined by Major Babington, who found the kala azar parasite. An unsuccessful attempt was made to administer the salvarsan intravenously, but the small lumen of the vein caused the needle to become blocked; eventually half a grain of salvarsan dissolved in 20 cc. of normal saline and caustic soda solution, was injected intramuscularly between the scapulae.
Clinical and other Notes

On examining him 48 hours after, a very marked improvement was noticed. But the most extraordinary change was noticed in his spleen, which no longer occupied the epigastric and upper part of the umbilical regions, and could no longer be felt in the left mammary line, but had retired to the left hypochondriac and upper part of the left lumbar regions. Three days after the injection his white blood corpuscle count was 9,300. His general condition had improved out of all knowledge, he took an interest in his surroundings, and played with his toys. He began to put on weight and took his food well. On May 14, his weight was 23 lb. 5 oz., his lips and conjunctivae were no longer colourless, but were a decided red. He could sit up by himself, and crawl about his cot. On May 27, his improvement appeared to be maintained. He was very lively, laughing and shouting in his play, and could walk about the ward. He slept well, and ate well. His lips and conjunctivae were normal in colour, and there was a tinge of colour in his cheeks. The condition of the spleen remained as it was forty-eight hours after the injection. He was discharged hospital under observation on May 27, his weight was then 22 lb. 2 oz.

Case 2. K. E., a girl, aged 1 year and 5 months, was admitted to hospital on April 27. For about two months previously she had been treated in quarters for bronchitis, and as she was getting weaker and more anaemic and thinner, her parents brought her to the hospital, on March 17. She was then very anaemic, and was found to have an enlarged liver and spleen. The provisional diagnosis of kala azar was made, and as a hopeless prognosis was given, her parents declined to leave her in hospital, and she was treated in her quarters. During this time until her admission on April 27, she had an intermittent temperature, ranging from normal in the morning to 103-104 at night, the pulse ranged from 120 to 160, and the respirations from 40 to 80. Owing to the encouraging result after salvarsan in case 1, she was admitted for like treatment. On April 28, her white blood corpuscle count was 4200, her weight was 15 lb. 15 oz., temperature 102, and the lower edge of the spleen was below the level of the umbilicus. She had numerous marks resembling old fleabites. Half a grain of salvarsan was dissolved in 20 cc. of normal saline and caustic soda solution, and injected intramuscularly between the scapula under chloroform and ether anaesthesia, at the same time smears of the liver, and of bone-marrow from the head of the tibia were obtained. The smears were examined by Major Babington, who discovered crowds of kala azar parasites in all of them. Next day her temperature was normal, morning and evening, and her general condition slightly improved, but no change was noticed in the spleen. She gained in weight for five days after the injection, and then began to lose again. Her weight on the fifth day was 16 lb. 6½ oz. On the seventh day after the injection the temperature began to go up again, and on the ninth day a second injection of
Clinical and other Notes

Salvarsan gr. 1 in 40 cc. of saline and caustic soda solution (half between the scapulae, and half above the buttocks) was given; at the same time a second liver puncture was made, and more parasites than before were found. For five days after the second injection she gained weight from 15 lb. 14 oz. to 16 lb. 2½ oz., and the temperature remained normal, but on the sixth day it began to rise, and from now on she became rapidly worse. On the seventeenth day her white blood corpuscle count was only 1900, on the eighteenth day she developed pleurisy and died on the twentieth day. All through she had a cough and signs of bronchial catarrh. She never took her food well.

Remarks. Whether the remarkable result of case 1 is a case of Post hoc vel propter hoc, I cannot say, but as many of my brother officers have far greater opportunities of treating this disease than we have in Malta, I present this note for their consideration. Of course it is too early to claim a cure for case 1, but his improvement was miraculously rapid. It is unfortunate that case 2 ended fatally, but hers was a much more acute infection, and there was a strong suspicion of tubercle about her. Even in her case there was a temporary improvement after each injection.

In case 1 there was no sign of any local reaction after the injection of salvarsan, and in case 2 there was no reaction after the first injection, and only a slight induration at the site of the injection over the buttocks, after the second.

A FATAL CASE OF PARATYPHOID FEVER A.

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Private F., King's Own Regiment, was admitted to the Station Hospital, Lucknow, on February 19, 1911, suffering from fever. He said he had not been feeling well for about four days. His temperature varied from 100° F. to 102° F. for two days after admission. On the 21st (seventh day of the disease) a blood culture was taken; this remained sterile, and the Widal reaction was + 1 in 40 to B. typhosus, and negative to B. paratyphosus A.

On the morning of the 25th his temperature was normal, but he complained of some abdominal pain, and said he felt sick. There was no rigidity or distention. When I saw him at 6 p.m. he was quite comfortable, temperature 102, pulse 104. The pain commenced again at 7.30 p.m., and at 10 p.m. I saw him in consultation with Captain Shea, R.A.M.C. He then had a typical acute abdomen. A provisional diagnosis of appendix abscess was made, and immediate operation decided on. Captain Shea opened the abdomen through a right pararectal incision. A normal appendix was found. As a quantity of seropurulent fluid