Clinical and other Notes.

TWO CASES OF INFANTILE KALA-AZAR.

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AND

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The etiology and the diagnosis of the following cases are of sufficient interest to make them worthy of record.

On May 17, 1930, a small boy, F. H., aged 2½ years, was admitted to the Families Section of the Military Hospital, Moascar, suffering from general malaise and debility with occasional evening pyrexia of mild degree of a few weeks' duration.

His history was as follows: He was born in Malta in October, 1927, and came to Egypt in December, 1928. Shortly after his arrival in Egypt, he was admitted to hospital with bronchopneumonia, but from that time had no further illness until his mother noticed his gradual decline in health in May, 1930. His admission to hospital in 1928 is of importance, as owing
to the obvious nature of the physical signs of his present disease, it would suggest that he acquired this disease during his residence in Egypt.

His family history is of interest. His mother and one brother were healthy, but his father gave a history of chronic malaria contracted in India and was last in hospital in Malta in 1928. Physical examination of the father revealed nothing abnormal. His sister K. H., aged 5 years, was found to have a similar condition, and was admitted to hospital on June 17, 1930. The physical signs discovered were common to both children and their appearance was very much the same.

The children were well nourished, but very pallid and flabby looking; the skin was clear and there were no signs of pigmentation or of jaundice. The abdomen was protuberant, but there was no ascites though the superficial veins were somewhat dilated, and examination revealed a greatly enlarged liver and spleen. The liver in the case of the boy extended four finger-breadths below the costal margin in the supine position, and the spleen was enormously enlarged, extending down to the left iliac fossa, vide photograph. Both organs on palpation felt smooth and moderately soft, and there was no complaint of pain or tenderness.

In the case of K. H., the organs felt distinctly firmer. No enlarged glands were palpable.

Physical examination of other systems was negative.

While in hospital the children had an irregular and mild evening temperature (100°F.), which did not show any characteristic double remission in the twenty-four hours, and they became increasingly debilitated and anemic.

The following investigations were carried out:—

(1) Repeated blood-smear examinations were negative for malaria.
(2) Fragility tests of red blood-cells gave normal results.
(3) Test for urobilin in the urine was negative.
(4) Wassermann reaction was negative.

The following blood examinations were carried out on F. H.:—

<table>
<thead>
<tr>
<th>Date</th>
<th>Total R.B.C.s</th>
<th>Total leucocytes</th>
<th>Haemoglobin</th>
<th>Colour index</th>
<th>Polymorphs.</th>
<th>Lymphocytes</th>
<th>Large monos</th>
<th>Eosinophils</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 17, 1930</td>
<td>5,240,000</td>
<td>7,187</td>
<td>90 per cent</td>
<td>0.86</td>
<td>1.5 per cent</td>
<td>66.5</td>
<td>81.5</td>
<td>0.5</td>
</tr>
<tr>
<td>May 20, 1930</td>
<td>4,300,000</td>
<td>8,750</td>
<td>80 per cent</td>
<td>0.93</td>
<td>16 per cent</td>
<td>67</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>June 1, 1930</td>
<td>4,670,000</td>
<td>90 per cent</td>
<td>80 per cent</td>
<td>0.90</td>
<td>25 per cent</td>
<td>59</td>
<td>14</td>
<td>2</td>
</tr>
</tbody>
</table>

A blood-count on K. H. revealed a more definite anaemia with leucopenia, thus:—

<table>
<thead>
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<th>Date</th>
<th>Total R.B.C.s</th>
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</tr>
</thead>
<tbody>
<tr>
<td>May 17, 1930</td>
<td>3,860,000</td>
<td>2,775</td>
<td>65 per cent</td>
<td>0.85</td>
<td>15 per cent</td>
<td>75</td>
<td>10</td>
</tr>
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</table>
To summarize the diagnostic problem, therefore, these were cases of splenomegaly with enlarged liver occurring in two children of the same family in Egypt, mildly febrile, and showing a blood-picture of mild anaemia with a definite lymphocytosis and a large mononuclear increase, but no abnormal cells or leucocytosis.

The differential diagnosis of an enlarged spleen with an enlarged liver in childhood presents many possibilities; they may be grouped as follows:

1. Splenomegaly associated with chronic infections, e.g., tuberculosis, syphilis, lymphadenoma.
2. Splenomegaly associated with blood disease, e.g., acute leukaemia, myeloid and lymphatic, splenic anaemia, and pernicious anaemia.
3. Splenomegaly associated with cirrhosis of the liver, e.g., Banti’s disease and splenomegaly with biliary cirrhosis.
5. Tropical splenomegaly—kala-azar and malaria.

It will be seen from the above investigations, without going into the differential diagnosis in detail, that the cases were probably: (1) Splenic anaemia infantum; (2) Gaucher’s disease; (3) kala-azar.

To consider these three more fully is not without interest.

Splenic anaemia infantum or von Jaksch’s anaemia pseudo-leukæmia-infantum should be definitely differentiated from the juvenile form of the chronic splenic anaemia of adults. True splenic anaemia practically never occurs in infancy; in addition, the anaemia in these cases is hardly severe enough. The splenic anaemia infantum has a characteristic blood-picture: great reduction of the red cells and haemoglobin percentage, a leucocytosis up to 30,000 with lymphocytic increase, the presence of nucleated red cells, and a constant myelocytosis up to six per cent [1]. Further, Hutchison states that it is confined to the first three years of life and should not be diagnosed after that period.

Finally, it is a rare disease and becoming rarer [2].

Gaucher’s disease first described in 1882 is now considered to be a special change in the reticulo-endothelial system. It is a rare disease; in 1924 Connor [3] collected records of only twenty-four cases.

The cases under discussion conform to its main features which are: its occurrence in childhood in several members of one family, and the great enlargement of the spleen without interference to any great extent with the general health. Two features generally described were, however, absent: (1) a yellowish wedge-shaped thickening of the conjunctivæ on both sides of the cornea, and (2) a brownish yellow discoloration in the areas of the skin exposed to light. The only method of making an accurate diagnosis is by demonstrating by splenic puncture the large mononuclear endothelial cells, which are present in the spleen, the liver marrow, and lymphatic glands in this disease.

Kala-azar. The cases presented almost all the features, the remittent irregular temperature—though there was no double rise in twenty-four
hours—the splenomegaly and enlargement of the liver and the blood-picture. Archibald [4] points out that a splenomegaly and a blood-picture showing anaemia with a proportionate reduction of haemoglobin, a marked leucopenia with a reduction of polymorphonuclears and eosinophiles, and a relative increase of lymphocytes and large mononuclears is almost diagnostic of this disease. Only one of the children, K. H., really gave such a picture; but in infantile kala-azar the leucopenia is often not evident. This appeared to be the most probable diagnosis, but against it was the fact that kala-azar was said to be unknown in Egypt, and the long period, eighteen months, which had elapsed since leaving Malta made it improbable that the disease could have been acquired there.

On July 5, 1930, one of the authors (W.M.C.) saw the cases and performed a splenic puncture on the boy, F. H. Leishman-Donovan bodies were present in large numbers in the smear from the splenic pulp, but were not found in the peripheral blood. The cases were treated with “Fouadin,” which has met with considerable success in Egypt in the treatment of bilharziasis in children. The dosage was 1.25 cubic centimetres every alternate day for all injections in the case of the boy, and ten injections of two cubic centimetres in the case of the girl. No improvement was noted and they were invalided to the United Kingdom on August 11, 1930.

As the diagnosis was now certain, we endeavoured to ascertain the actual incidence of kala-azar in Egypt. The Public Health authorities stated that no cases of kala-azar in Egypt had been reported for some years, but during the last ten years they could trace forty-five cases of leishmaniasis, this diagnosis being inclusive of tropical sore. These were sporadic cases and most probably did not arise in Egypt. Archibald records only two cases in Egypt, and Stitt says the disease does not occur in Egypt. We were also informed that there is no record of a case of kala-azar being admitted to the Kaer-el-Aini Hospital, Cairo, but that there were cases of cutaneous leishmaniasis reported in an endemic area in the neighbourhood of Kantara near the Suez Canal.

On the other hand, A. Panayatotou [5] reported a case in Alexandria in 1929, making the fourth case he has seen; the other three cases were reported by the same author in 1922. The disease is, however, one of definite rarity in Egypt. The incubation period of the disease is vague; the shortest definite incubation period is ten days recorded by Manson [6]. Manson-Bahr thinks that the disease may remain latent for a long period, but the general opinion would appear to be that the incubation period is less than six months. In these cases the incubation period would appear to be eighteen months, if the disease was acquired in Malta. We incline to the view that such was the case, and that the condition was kala-azar infantum acquired in Malta and remaining latent for eighteen months in Egypt. The absence of any other cases in the area would appear to confirm this view.
We have pleasure in acknowledging our debt to Major G. Shaw, R.A.M.C., who was in medical charge of the cases and carried out the treatment. He supplied the notes and the history charts, etc., which enabled us to publish the cases.

We have also to thank the D.D.M.S., B.T.E., Colonel J. T. Johnson, D.S.O., for permission to publish the cases.

REFERENCES.


COLLAPSIBLE SWING INCINERATOR.

By Major J. C. Chukerbuti,

Indian Medical Service.

This incinerator was first used in 1922 in Saidgi, North West Frontier Province of India, and was found to burn litter more quickly than the usual fixed varieties. An incinerator of the size described is capable of burning daily the litter of a cavalry regiment. A smaller model was tested at the British Military Hospital, Secunderabad, and was found to be satisfactory.

Component Parts.—(1) Two posts, six feet long, one end having a metal U-shaped piece, the other end being pointed. The pointed ends are driven into the ground, the posts being about ten feet apart.

(2) A bar, round in section and about eleven feet long, the ends of which rest on the upright posts.

(3) A metal bar bent in a flattened U-shape, the base being straight.