A SECOND CASE OF MALTA FEVER FROM NORTHERN NIGERIA.

By H. A. FOY, L.R.C.P., L.R.C.S.Ed.

Mr. J. H. G., aged 30, admitted for fever at Maifoni, South Bornu, on June 24, 1908.

History.—On June 22 felt ill, but ten days previously to this felt indisposed and unfit for work.

Habits of Life.—Regular smoker, alcohol in moderation, has taken quinine daily in "tabloids" regularly since middle of January, 1908.

Residence.—Present tour in Northern Nigeria dates from October 15, 1907. Previous to this spent two years in England, after a tour of thirteen months in Southern Nigeria.

Previous Illnesses.—In the early part of his present tour, while stationed at a place called Akwacha in the south of the Protectorate, he had three small attacks of malarial fever, each lasting a couple of days. Had another attack of malaria on January 12, when on his way up to Maifoni, where he kept good health. From the middle of May to June 7 went into the district to relieve a detachment where his water supply was not very good, and he drank unboiled milk. There he had diarrhoea, two to three motions a day. The onset of his present illness was fifteen days after his return.

Condition on Admission.—Well-nourished young adult. Physique good. Temperature 100° F.; pulse 80.; respiration 16. Organs healthy.

Digestive System: Tongue coated, loss of appetite, bowels constipated. Fecal examination: Anguillulae and ova of Trichocephalus dispar present.
Nervous System: Constant headache, with spasmodic exacerbations when pain became very intense, radiating forwards from the parietal area to the forehead, intolerance to light, pupils contracted, insomnia marked.

The urine contained urates, but no albumen nor sugar. Sweating was a marked feature throughout the first two weeks, and after a few days gave rise to a great outbreak of sudamina and erythema.

The blood examination of fresh specimens and of stained films gave no information; no malarial parasites were seen.

The initial rise of temperature resembled a miniature chart of enteric fever, only that the duration of the wave of fever was not that of typical enteric, for the morning temperature began to decline on the eleventh day of the disease, and the temperature became practically normal by the eighteenth day. The maximum temperature reached during the first week was 103.4°F. Later, by July 23, he again had a low wave of temperature for eleven days; then again normal for two days, when on August 6, a third wave of low temperature began, lasting twenty days, up to August 26, when it again fell to normal, and the patient was now on his way to England. A slight spell of temperature again occurred on September 4, lasting three days, and again later for a few days during the voyage to Plymouth. He arrived there on October 1, when he came to London, and was subsequently under the care of Sir Patrick Manson. During the voyage home the patient did not gain in strength and general health.

The other symptoms which occurred during the first week, and subsequently in the first stages of the attack, were as follows: Tongue remained coated, constipation continued up to the fifth day, and on the sixth day
diarrhoea supervened; there were five motions, the characters of which were that they were of liquid, thick, pea-soupy consistency, yellow and foul-smelling. The diarrhoea, to the extent of two or three motions a day, continued for nine days; and then the motions were reduced to one a day, which was often formed, but varied in consistency, was frequently coated with mucus, and occasionally streaked with blood. This latter state of the bowels continued until the patient left for England. The headache and restlessness with insomnia were marked features during the first eight days of the disease; pupils were at first contracted, and then gradually dilated. The spleen became enlarged.

The Blood.—On July 29, thirty-four days after the onset of the fever, specimens of blood were taken and sent to England. These were examined two months later by Dr. Low for the agglutination test for typhoid, with a negative result.

From the symptoms at the end of the first week, the diagnosis of a mild attack of enteric fever was made. It would be well to note that a most characteristic case of enteric fever had occurred four months previously in the station.

Diagnosis.—The points in favour of enteric fever at the end of the first week were as follows: Gradual onset; character of the fever; persistent headache and insomnia; contracted pupils followed by dilatation; slight bronchitis; early constipation followed by diarrhoea, the character of the motions resembling those of typhoid; and a comparatively slow pulse-rate.

History of the Case after October 1, 1908, in London.—A slight wave of temperature again occurred between October 2 and 5, then a period of normal temperature, up to the 19th, then again another rise lasting from
October 20 to November 15. Towards the latter part of this period of fever the temperature reached a maximum of 103° F., on November 9. During this attack of fever the blood was, on November 4, examined by agglutination test for Malta fever at the London School of Tropical Medicine, with a negative result. On November 6 the blood was again examined in detail by Dr. Low, with the following results:

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<tr>
<th>Blood Count</th>
<th>Differential Leucocyte Count</th>
<th>Parasites</th>
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<tbody>
<tr>
<td>Red corpuscles 4,750,000</td>
<td>Polymorphonuclears 52 per cent.</td>
<td>Nil.</td>
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<tr>
<td>White corpuscles 5,600</td>
<td>Large mononuclears 14 per cent.</td>
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<tr>
<td>Hemoglobin 90 per cent.</td>
<td>Lymphocytes 41.6 per cent.</td>
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<td></td>
<td>Eosinophiles 2.8 per cent.</td>
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<td></td>
<td>Transitional 2 per cent.</td>
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<td></td>
<td>Mast cells 0.2 per cent.</td>
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<td>Total 98.2 per cent.</td>
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Number counted—500.

Agglutination Reaction.—A positive reaction for Malta fever was obtained by Dr. Low on this occasion. On November 10 a tender spot appeared in the right thigh.

From November 16 to 21 another rise of temperature occurred. On November 17 a sample of blood was sent for the agglutination test to Dr. Nabarro at University College, and with it another sample of normal blood from a healthy person was sent as a control, with the result that the specimen from the patient gave a distinct positive reaction to Malta fever both microscopically and macroscopically, with dilutions of 1 in 250, whereas the control of normal blood gave a negative reaction.

Subsequently the blood was tested by the Clinical Research Laboratory, and by Fleet-Surgeon Bassett Smith, with a positive result.

Since December the temperature has run a fairly
normal course with occasional slight irregular rises, the general condition has improved much, the patient is no longer anaemic and has become stout, but his pulse continues to run high, ranging from 90 to 100 per minute, rising still higher to 120 or more on the slightest exertion. Taking into consideration the symptoms of the case as a whole, together with the chronic course run by the disease, which was marked by an initial spell of rise in temperature followed by several irregular relapses, although the initial attack of fever together with the other symptoms simulated a mild attack of enteric fever, it is practically certain that the case was one of Malta fever from the onset, as verified by the agglutination test. It is interesting to know in connection with this diagnosis that the unboiled milk which he drank some three weeks previous to his illness was goat's milk.

Dr. Christopherson said he would like to remark that the Malta fever he had met with in the Sudan had not been accompanied by sore throat nor pains in the joints which he understood were characteristic symptoms of Malta fever elsewhere.

Sir Patrick Manson said that the two cases of Malta fever referred to in the papers just read were of interest clinically, but more especially as they had proved that this disease was found in Northern Nigeria. The second case was of particular interest to him because he was originally not at all sure that it was not one of sleeping sickness. He examined the patient's blood microscopically from time to time, but he failed to find trypanosomes, and it was only after some considerable time that he thought it might be Malta fever. He confessed to a want of confidence in Widal's reaction as a possible means, in this country, of determining the diagnosis of
Malta fever, but in this case he (Sir Patrick Manson) got four positive reactions and one negative, and he thought that this, together with the clinical symptoms, was sufficient to establish a diagnosis of Malta fever. Some days ago he sent a patient's blood to Dr. Low for a Malta fever test. Dr. Low got a positive reaction 1 in 100, a very marked and rapid reaction, and so far as reaction was concerned the diagnosis of Malta fever was confirmed. But he suspected the case might be one of tuberculosis or syphilis instead of Malta fever, and he gave the patient iodide of potassium. He improved rapidly under this treatment and had remained well ever since, so that one could not be quite sure of the reliability of reaction tests under the conditions in which they were done in this country.