

MEDICAL MEMORANDA

Case of *Plasmodium Vivax* Malaria Contracted in Southern Europe

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Transmission of malaria has for some years apparently been confined to tropical and subtropical regions. Europe has been considered free of malaria since 1968. In the present case the patient seems to have been infected with malaria during a holiday in Southern Europe.

Case Report

A 24-year-old sociologist and his male companion left England on 9 August 1970 on a hitch-hiking holiday, travelling through France and Switzerland and down the Adriatic coast of Italy to Sicily. They then embarked for Sardinia and from there to Corsica, where they spent 12 days on a seaside camping site. On all three islands they slept in the open, some nights without a tent, and sustained multiple insect bites; these were most numerous at St. Florent in Corsica. They left Corsica on 8 September and, travelling by boat and train to London, arrived home on the 9th.

Two days later the patient developed malaise, aching pains in the leg muscles, and fatigue. Febrile episodes occurred, lasting up to 18 hours, with intervening afebrile periods of about 24 hours. He was treated initially with antibiotics by his general practitioner without improvement. On day 7 of the illness he had a rigor and his temperature was recorded as 103°F (39.4°C). On day 9 he was admitted to hospital. There was no history of previous illness, and apart from a short holiday in Greece three years previously he had never travelled abroad. He did not admit to any injections apart from the usual immunization procedures.

On examination he looked well but his temperature was 101°F (38.3°C). The throat was clear and there were no rashes or skin punctures and no lymphadenopathy apart from a few shotty inguinal nodes. The spleen was soft and enlarged to 8 cm below the costal margin, and the liver was felt 3 cm below the right costal margin. He was not jaundiced. On the evening of the day of admission his temperature rose to 105°F (40.5°C).

Investigations.—Haemoglobin 12.3 g/100 ml; white cell count 6,100/mm³ (53% neutrophils, 2% eosinophils, 36% lymphocytes, 9% monocytes); platelet count 36,000/mm³. Blood film examination showed moderate anisocytosis of the red cells, and malaria parasites identified as *Plasmodium vivax* were seen. There were approximately 20 plasmodia per 10,000 red cells, mainly gametocytes, and also very occasional ring forms. The species was later confirmed by Mr. P. G. Shute, of the Malaria Reference Laboratory. Urine testing showed no haematuria or haemoglobinuria, and a stain of urine deposit for iron granules was negative. Serum bilirubin 1.0 mg/100 ml, Van den Bergh negative, remaining liver function tests normal. Blood urea 59 mg/100 ml, plasma electrolytes normal.

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He was treated with oral chloroquine 600 mg base initially and 300 mg base six hours later, followed by 150 mg base twice daily for two days. Within 24 hours the fever had settled and there were no further rigors. Examination of the blood film 18 hours after treatment began showed a very occasional malaria parasite. None were seen in blood films taken three and five days later. He was then given a 14-day course of primaquine 15 mg daily. He was discharged home symptom-free 10 days after admission. At outpatient followup four weeks later he was well, the spleen was no longer palpable, and examination of the blood film showed no abnormality. At the time of writing his companion remained well and no parasites were found in his blood.

Comment

There is little doubt that this was a primary attack of malaria, since there was no previous illness and the patient's only other visit abroad had been a short holiday in Greece three years previously. The incubation period in some strains of *P. vivax* can be prolonged, possibly up to 18 months, but three years is outside the limit. There are seven cases on record of transmission of malaria by blood transfusion in the United Kingdom (Dike, 1970), and transmission by syringes among drug addicts must be kept in mind (Shute and Maryon, 1969); neither were possibilities in this case. That the infection was acquired in this country is very unlikely, and the last cases of indigenous malaria were in Lambeth in 1953 (Shute, 1954). It seems to be the first case of malaria transmitted in Europe reported in Britain for 15 years (Shute, personal communication, 1970). It is, of course, possible that other cases have occurred but have not been reported (Bruce-Chwatt, 1970). Malaria is a notifiable disease in this country, and M.O.H. reports form the basis of the W.H.O. information from the United Kingdom.

The exact place at which the infection was acquired cannot be ascertained, but it seems most probably to have been at St. Florent in Corsica. Though sleeping out in the open cannot be common practice many people from Britain spend summer holidays camping in the areas mentioned, and our experience described here warrants awareness of the possibility of malaria in persons returning from south-west Europe.

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References

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