Malaria and sickle cell disease

Haematologica 2006; 91:(3)e48

A 7-year boy with homozygous sickle cell disease, diagnosed at the age of 2, was admitted to hospital complaining of abdominal pain, headache, fever (temperature 38.6 °C) and jaundice. Liver enlargement was detected but the spleen was not palpable. The boy had emigrated from equatorial Guinea 1 month previously. The hemoglobin level was 42 g/L and there was evidence of hemolytic anemia (lactate dehydrogenase: 1023U/L; haptoglobin:<6 mg/dL; reticulocytes: 549,000/mm^3). Electrophoresis showed a single band of hemoglobin S (Hb S:90.9%), hemoglobin F:4.1% and hemoglobin A2:2.6%, consistent with the presence of hemoglobin SS sickle disease. Examination of a blood smear revealed a high proportion of sickle cells (arrow), erythroblasts (ball and line) and frequent red cells containing *Plasmodium falciparum* (arrowhead). The patient had no previous history of malaria. Although hemoglobin S is considered to be protective against *Plasmodium falciparum*, this is not always the case and in this child, the congenital disease complicated the diagnosis of malaria because hemolysis was related to the infection rather than to sickle cell disease.

Francisco J De Paz,[1] Alberto Romero,[1] Dolores Diez,[1] Carmen Botella,[1] Diego Torrus,[2] Cristina Moscardó,[3]

[1]Hospital General Universitario Alicante. Department of Haematology. Section of cytology; [2]Hospital General Universitario Alicante. Department of Internal Medicine.; [3]Hospital General Universitario Alicante. Department of pediatrics

Keywords: sickle cell disease, Plasmodium falciparum, malaria

Correspondence: Alberto Romero Casanova
Hospital General Universitario Alicante C/ pintor Baeza s/n
03010 Alicante SPAIN
E-mail: alberto0976@hotmail.com