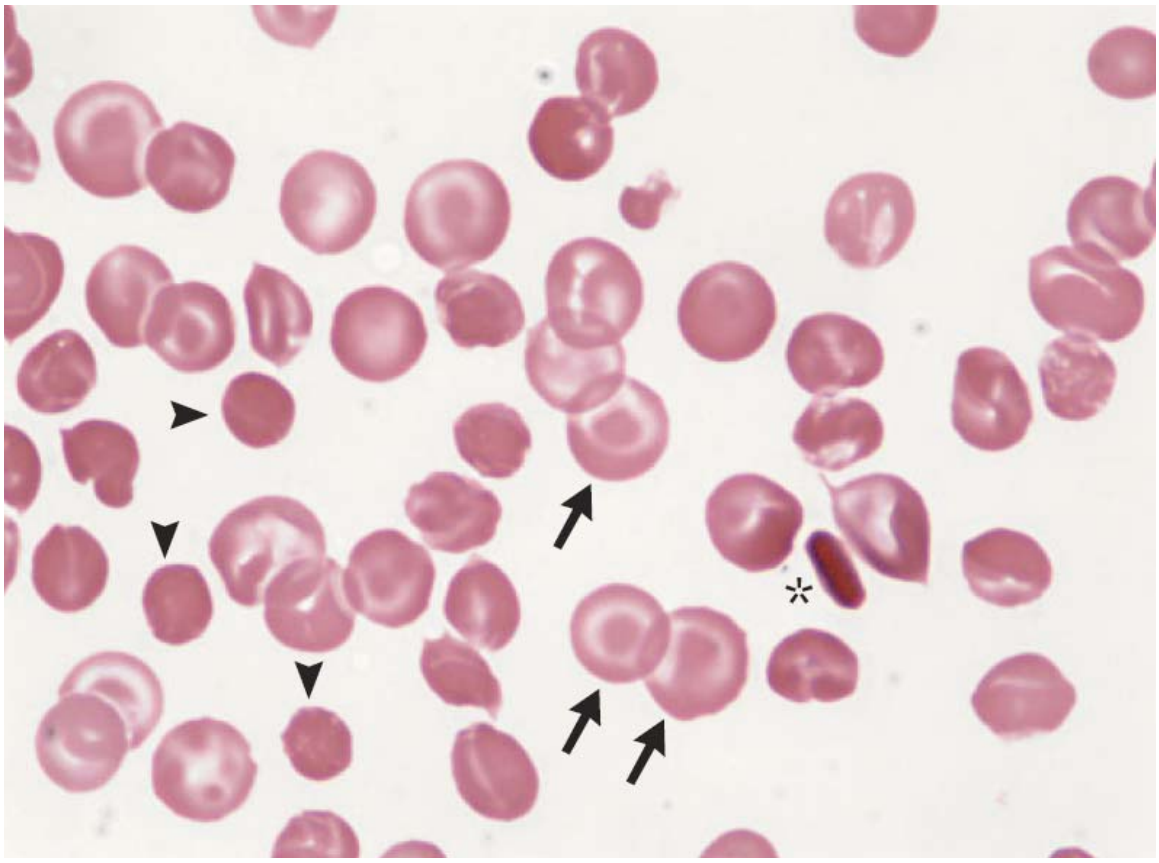
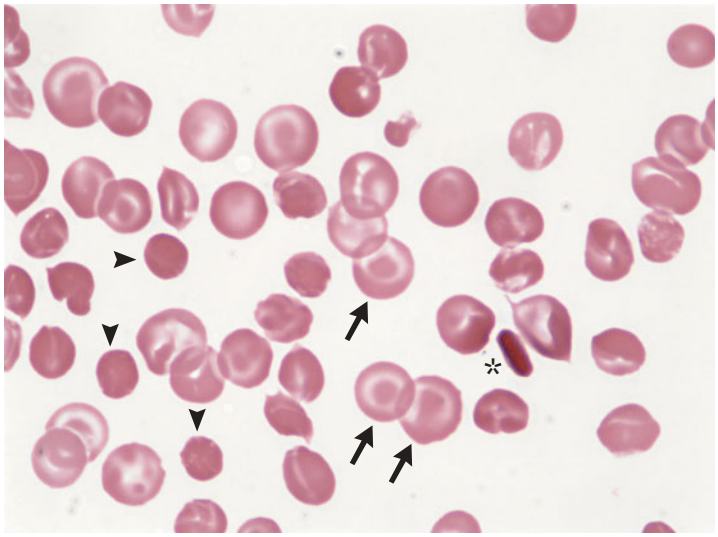


A Ghanian child is found to have a hematcrit of 25, MCV 54. What is the likely diagnosis?

IMAGES IN CLINICAL MEDICINE

Homozygous Hemoglobin C Disease



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A GHANAIAN CHILD WAS FOUND ON ROUTINE SCREENING TO HAVE A hemoglobin level of 9.0 g per deciliter, a hematocrit of 24.3 percent, a mean corpuscular volume of 53.8 μm³, a red-cell distribution width of 28.8 percent, and an uncorrected reticulocyte count of 1.6 percent. There were no signs of splenomegaly. Testing of the father, who was asymptomatic, revealed only hemoglobin C on electrophoresis and a complete blood count similar to that of the child. A blood smear showed a constellation of findings that were characteristic of homozygous hemoglobin C disease: target cells (arrows), microspherocytes (arrowheads), rod-shaped cells containing hemoglobin C crystals (asterisk), anisocytosis, and poikilocytosis. The child is now healthy and asymptomatic.

Homozygous hemoglobin C disease is generally a benign condition associated with mild hemolytic anemia and splenomegaly. In terms of geographic distribution, the hemoglobin C allele is found at the highest frequencies in West Africa, where it has been associated with protection against malaria.