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CONTINUING MEDICAL EDUCATION
ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Hematology Quiz – Case 40

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ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2015, 32(3):378–379

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A 17-year-old black patient from Nigeria was admitted to our Outpatient Clinic because of fever, severe anemia and jaundice. The patient also complained of fatigue, muscular weakness, dizziness, irritability and headache. The fever was up to 38.5 °C, it started three days before admission and it was accompanied by severe chills. The administration of amoxycillin had no effect on fever.

The patient's past medical history included severe anemia diagnosed during infancy, which needed transfusions until the age of 7 years, when splenectomy was performed, resulting in a significant reduction in transfusion requirements. The patient has not been transfused since the age of 12. After a febrile episode at the age of 13, a diagnosis of malaria was established and he was given the appropriate treatment. His family history was unremarkable.

On admission the patient's temperature was 38.7 °C, the blood pressure was 135/80 mmHg, the pulse rate was 115/min and the respiratory rate was 22/min. Sclerae were yellow and the mucous membranes appeared pale. Physical examination also revealed a rough systolic murmur heard on the pulmonary valve area and a mild hepatomegaly (2 cm under the right costal margin) with severe tenderness. There were no signs of a pulmonary or urinary tract infection and the neurological examination showed no abnormalities.

His hematological profile was as follows: WBC=18×10^9/L (differential count: neutrophils 82%, lymphocytes 12%, monocytes 5%, eosinophils 1%), Hb=8.2 g/dL, Ht=25.2%, MCV=64 fL, MCH=21 pg, MCHC=30.7 g/dL, and platelets 152×10^9/L. The reticulocyte count was 7% and the erythrocyte sedimentation rate was 64 mm/1h. The examination of the peripheral blood smears showed impressive changes in red cell morphology (figures 1, 2) while hypersegmented neutrophils with an increased number of granules were also observed. The serum biochemical tests were as follows: SGOT=41 U/L, SGPT=65 U/L, γGT=182 U/L, ALP=322 U/L, bilirubin=5.2 mg/dL (conjugated 3.2 mg/dL

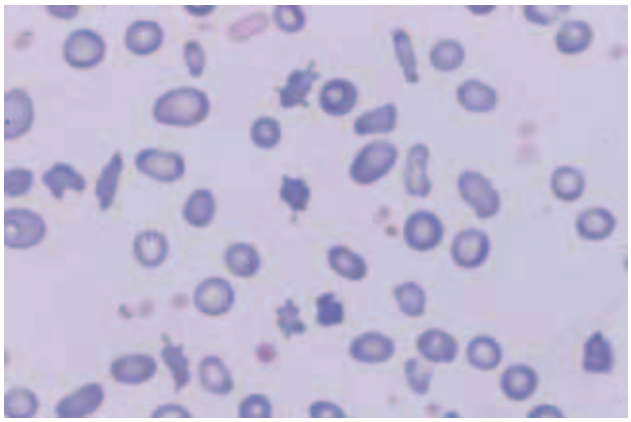

Figure 1

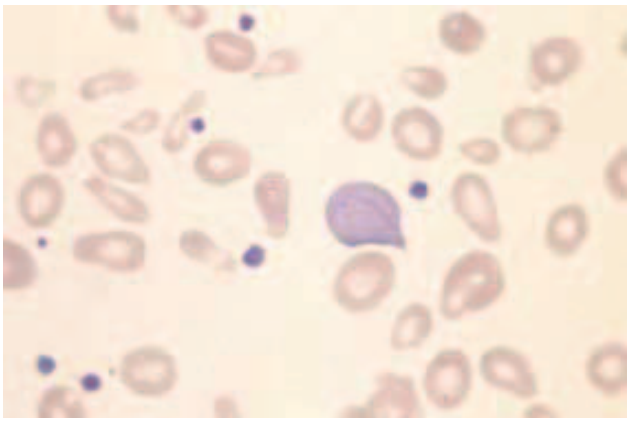

Figure 2

and unconjugated 2 mg/dL), LDH=440 U/L, haptoglobins <25 mg/L, ferritin=420 ng/mL, B_{12}=120 pg/mL, and serum folate=1 ng/mL. The Coombs reaction was negative. The hemoglobin electrophoresis revealed no abnormalities. The osmotic fragility test was increased (MCF=0.70 g/dL), as well as the autohemolysis test (18%/48h) which was partially corrected with glucose (8%). The thyroid function tests, the chest x-rays and the electrocardiogram were normal. The ultrasonography of the abdomen showed cholelithiasis with multiple, irregularly shaped stones resulting in gallbladder inflammation. The bone marrow aspiration revealed an erythroid hyperplasia (figures 3, 4), while giant metamyelocytes were also present.

The blood cultures grew Gram negative bacteria and ceftriaxone was administered. Temperature returned to normal after two days, and serum bilirubin, transaminases, γGT and alkaline phosphatase fell to normal after a week.

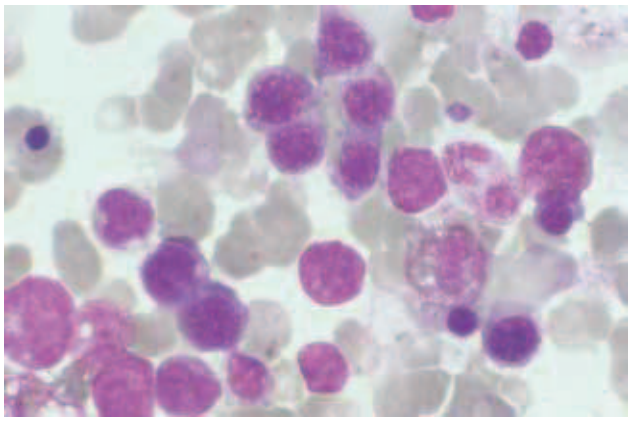

Figure 3

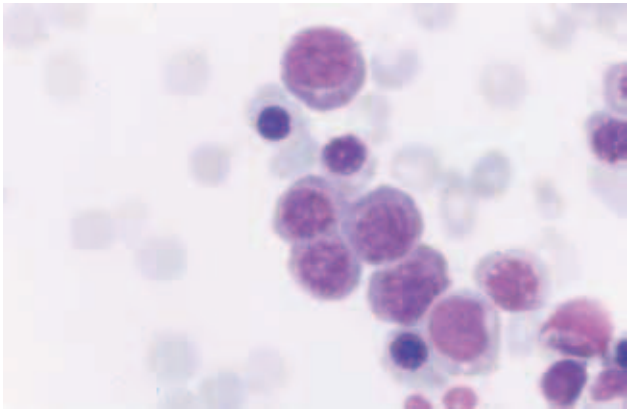

Figure 4

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