Spur cell hemolytic anemia of severe liver disease

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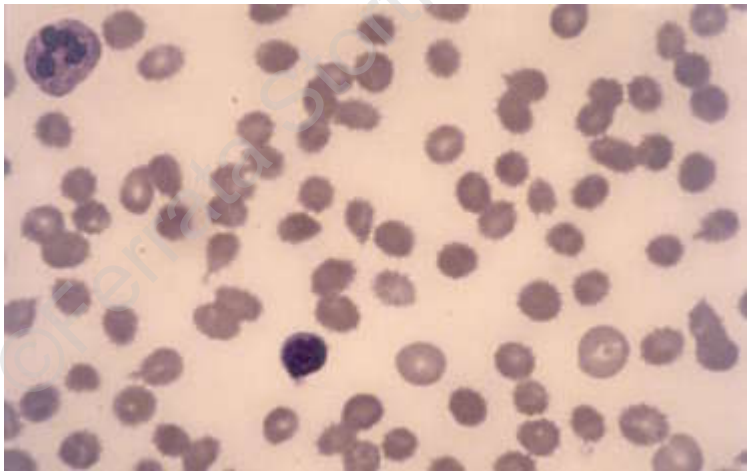
The image presented here is the blood picture (Wright's stain, 100×) of a 41-year old woman diagnosed (1993) as having chronic liver disease related to alcohol abuse. The patient was admitted to hospital in 1997 because of a one month history of ascites, edema and jaundice. On admission she had 2 cm hard hepatomegaly, 5-6 cm splenomegaly, hemoglobin 84 g/L, VCM 129.8 fL, RDW 16.6%, reticulocytes 160.5×10^9/L (polychromasia and marked acanthocytosis on the blood film), leukocytes 6.6×10^9/L, platelets 35×10^9/L, negative direct antiglobulin test, prothrombin activity 37% (INR 2.1), total bilirubin 19 mg/dL (conjugated fraction 8.1 mg/dL), LDH 560 U/L, GOT 55 U/L, GPT 42 U/L, cholesterol 116 mg/dL and normal serum phosphorus. Ultrasonography revealed a small, lobular liver with splenomegaly, collateral circulation and cholelithiasis. Spur cell hemolytic anemia of severe liver disease was diagnosed. The patient improved with diuretic treatment, then was lost from follow up.

Spur cell hemolytic anemia is an ominous, uncommon complication of severe liver disease, manifested by rapidly progressive hemolytic anemia with acanthocytes on the blood smear. This red cell shape is due to the excess free cholesterol in plasma lipoproteins of patients with severe liver disease with subsequent erythrocyte remodelling by the spleen (towards spheroidal cells with longer, more irregular surface projections).



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