Severe bone marrow aplasia and Coombs-positive autoimmune hemolytic anemia in microfilariasis - coincidental or causal?

Mikrofilariziste ağır kemik iliği aplazisi ve Coombs-pożitif otoimmün hemolitik anemi- sebep mi, rastlanti mi?

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A 28-year-old male presented with generalized weakness, fever, high colored urine and severe anemia, icterus and petechiae. His hemoglobin (Hb) and total leukocyte, platelet and absolute reticulocyte counts were 34 g/L, 1.8x10⁹/L, 32x10⁹/L, and 28x10⁹/L, respectively. Blood smear examination showed marked RBC agglutination, few spherocytes, neutropenia with an absolute neutrophil count (ANC) of 50/μL, and Wuchereria bancrofti microfilariae (Figure 1a). Both direct and indirect Coombs tests (DCT, ICT) and urine hemosiderin were strongly positive. Ham's, sucrose lysis tests and gel card test for paroxysmal nocturnal hemoglobinuria (PNH) were negative. Serum chemistries showed unconjugated hyperbilirubinemia (6.5 mg/dl) and elevated lactate dehydrogenase (LDH) levels (345 U/L). Viral serology and antinuclear antibodies (ANA) and dsDNA were negative. Bone marrow trephine biopsy showed markedly hypocellular marrow spaces with less than 5% cellularity (Figure 1b,1c). Both aspirate smears and trephine biopsy showed many Wuchereria bancrofti microfilariae (Figure 1d). He was started on diethylcarbamazine (DEC) (6 mg/kg/day), prednisone (60 mg/day) and cyclosporine (200 mg/day) and was reviewed after six weeks, when he showed improvement of anemia and icterus with a Hb and serum unconjugated bilirubin of 6.5 g/dl and 2.8 mg/dl, respectively. However, his cytopenias remained unimproved. Repeated DCT and ICT were both negative. This case highlights a possible co-evolution of two hematological disorders with an immunological etiopathogenesis triggered by chronic filarial infestation.

References


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