



Parvovirus B19 diagnosed by bone marrow biopsy

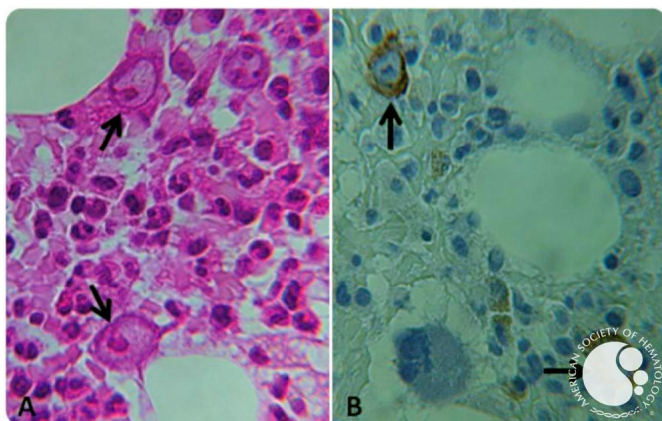
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Category: Infectious Disease > Viruses > Parvovirus B19

Description:

A 51-year-old, HIV-negative woman with a history of metastatic carcinoma of the thyroid was found to have severe anemia (6.1 g/dL). Investigation revealed evidence of autoimmune hemolytic anemia: high lactate dehydrogenase (1332 IU/L [normal range (N), 313-618]) and bilirubin (4.8 [N, 0.2-1.3]) that was mostly indirect, low haptoglobin (<7 mg/dL [N, 26-226]), and strongly positive direct Coombs test (immunoglobulin G [IgG], C3d). Despite severe hemolysis, the reticulocyte counts remained very low ($1.6 \times 10^3/\mu\text{L}$). For that reason, a bone marrow examination was done. The biopsy revealed giant proerythroblasts with large intranuclear inclusions resembling nucleoli (panel A). CD71 (panel B) and glycophorin, but not CD117, confirmed that these large cells are truly erythroid precursors. This is the classical appearance of erythroid precursors that are infected by parvovirus B19. Serologic examination of the blood (enzyme-linked immunosorbent assay) found immunoglobulin M antibodies to parvovirus, but not IgG ones. Reverse transcription polymerase chain reaction of the bone marrow sample was positive for parvovirus. The patient was treated with steroids, IV immunoglobulin, and folic acid. By 2 weeks, hemolysis had stopped and the hemoglobin and blood reticulocyte count normalized, but the Coombs test result remained positive.



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