Images

Blood Research Educational Material

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Bone marrow aspirate showing *Leishmania donovani* in polymorphs

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A 41-year-old man who was a permanent resident of Uttarakhand, a north Himalayan and sub-Himalayan state of India, presented with bilateral pedal edema and backache. He had no history of fever, hepatosplenomegaly, or lymphadenopathy and was clinically suspected of having multiple myeloma. A complete blood cell count test showed normocytic normochromic anemia (hemoglobin concentration, 7.5 g/dL) with normal white blood cell count and platelet count. Biochemical investigations showed decreased albumin (2.1 g/dL) and increased globulin (8.6 g/dL) levels with a high serum alkaline phosphatase level (315 IU/L; reference range, 33-96 IU/L). A subsequent bone marrow examination revealed hemophagocytosis (1+) and elevated plasma cells (14%) and iron stores (4+). In addition, both extracellular and intracellular Leishmania donovani (LD) bodies were observed. Interestingly, these LD bodies were present inside neutrophils, which is an uncommon feature of leishmaniasis (Giemsa stain, $\times 1,000$). LD bodies, if intracellular, are usually present in the histiocytes. However, the present clinically unsuspected case of leishmaniasis from a nonendemic region demonstrated the presence of LD bodies inside neutrophils. This observation is rarely reported and is considered an uncommon finding in bone marrow examinations.