A case LGL leukemia with paucity of erythropoiesis.

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Abstract

A 63 year old patient with chronic lymphocytosis and neutropenia is described. A bone marrow biopsy showed a markedly hypercellular specimen with an interstitial and intrasinusoidal lymphoid infiltrate. Immunohistochemistry and immunophenotyping identified these as LGLs. With paucity of erythropoiesis diagnosis of LGL leukemia with pure red cell aplasia is reached.

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Key clinical message.

The differential diagnosis for neutropenia is large and includes, drug effect, viral infections, sepsis, immune, hypersplenism, bone marrow disorder etc. The presence of an autoimmune disorder and lymphocytosis should prompt the practitioner for a bone marrow biopsy to rule out a lymphoproliferative disorder including large granular lymphocytic (LGL) leukemia.

Accompanying text.

A 63 year old male patient with progressive lymphocytosis and cytopenias is described. At presentation, he complained of an upper respiratory tract infection and infrequent oral ulcers. His CBC showed a hemoglobin at 106 g/L, neutrophils at 0.9 x 10E9/L and lymphocytes at 16.2 x10E9/L. The peripheral blood film showed lymphocytosis with LGL morphology (panel A, x 20). A bone marrow aspirate showed trilinear hematopoiesis with paucity of erythropoiesis. As well, a lymphoid infiltrate was present showing LGLs (panel B x 50). Biopsy showed a hypercellular bone marrow with left shifted myelopoiesis, megakarycytopoiesis and scant erythropoiesis (panels C x10, and panel D x40 respectively). CD20 and CD34 staining for B lymphocytes and blasts are noncontributory (panel E and F, x10). CD 3 showed interstitial and intersinudiodal (black arrow) infiltration of T cells (panel G, x10 and panel F, x40). Multiplex PCR analysis showed a clonal rearrangement in the TCR beta gene. Similar to peripheral blood, flow cytometry on the aspirate returned an atypical CD8+ T-cell population. The diagnosis of LGL leukemia with pure red cell aplasia was made. The differential diagnosis of neutropenia is large. In presence of an autoimmune disorder and lymphocytosis, LGL leukemia should be ruled out[1].

Reference.

Gazitt T and Loughran TP. Chronic Neutropenia in LGL Leukemia and Rheumatoid Arthritis. *Hematology Am Soc Hematol Educ Program* . 2017; 2017(1): 181-186.