Case Report

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Persistent Lymphocytosis: An Unusual Feature in Sarcoidosis

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Key Words

Lymphocytosis, persistent
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Abstract

Persistent lymphocytosis as a presenting sign in sarcoidosis is described in a 61-year-old man. Lymphocytosis is an unusual finding in sarcoidosis. The case presented seems to suggest that sarcoidosis should be considered in the differential diagnosis of lymphocytosis

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Introduction

Lymphopenia is a common finding in sarcoidosis. However, normal lymphocyte counts are not unusual and are associated with good prognosis [1]. We describe a patient who presented with a high lymphocyte count which persisted over a long follow-up period and disappeared after treatment for neurosarcoi-dosis. To the best of our knowledge such prolonged lymphocytosis has not been reported in sarcoidosis.

Key words: Lymphocytosis, persistent; Sarcoidosis

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Case Report

A 61-year-old man was referred in January 1976 to the Department of Hematology because of a persistent finding of lymphocytosis of $12-13 \times 10^9/l$. The physical examination revealed bilateral enlarged axillary lymph nodes, hepatomegaly 5 cm below the right costal margin and mild splenomegaly. Laboratory examinations revealed WBC $16.9 \times 10^9/l$, 78% lymphocytes, 18% neutrophils, 4% monocytes, hemoglobin 14 g/dl, the platelet count was $208 \times 10^9/l$. Bone marrow aspiration showed normocellular marrow with a normal myeloid erythroid ratio and a mild increase in lymphocytes. The estimation of lymphocyte subpopulations in the peripheral blood revealed 73 % E-rosette-forming cells and 15 % of cells bearing surface immunoglobulin, using standard techniques [2]. Im-munotyping with OKT-S reagents [3] of the peripheral blood lymphocytes showed 15-20% suppressor cells (T8) and 35-40% helper cells (T4) with a normal T4:T8 ratio. Serum calcium, liver and kidney function tests, immunoelectrophoresis, and

quantitation of immunoglobulins were normal. Tests for EB virus, cytomegalic virus and toxoplasmosis were negative. X-ray examination of the chest

Fig. 1. Lymph node with epitheloid cell granuloma. HE. $\times 250$. Fig. 2. Liver. Noncaseating epitheloid cell granulomas: one of them in stage of fibrosis. HE. $\times 250$.

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during the entire follow-up period, a normal proportion of T lymphocytes in the peripheral blood and a normal T4:T8 ratio, which contravenes the decrease of helper-to-suppressor ratio predominantly found in sarcoidosis [6]. However, a normal helper-to-suppressor ratio is not an uncommon feature in subacute and chronic sarcoidosis [7]. A high lymphocyte count consisting of mature lymphocytes has also been associated with miliary tuberculosis, another granulomatous disease [8]. However, persistent prolonged lymphocytosis with such high lymphocyte values is unusual and, to the best of our knowledge, has not been previously described in sarcoidosis. This case would seem to suggest that sarcoidosis should be considered in the differential diagnosis of lymphocytosis.

Fig. 3. Skin. In the lower dermis there are noncaseating granulomas of epitheloid and giant cells. HE. $\times 100$.

was normal. Axillary lymph node and liver biopsies revealed noncaseating granulomas suspicious of sarcoidosis (fig. 1, 2); Kveim-Siltzbach test confirmed this diagnosis (fig. 3). Skin tests with PPD, trichophyton, streptokinase-streptodornase were positive, whereas the test with *Candida albicans* was negative.

In the following 8 years the clinical course of the patient was unremarkable. Lymphocytosis of $8-12 \times 10^9/l$ persisted. In January 1984 the patient began to complain of vertigo, gait instability and blurred vision. The neurologic and ophthalmoscopic examinations were normal. Brain radionuclide scan, computerized tomography scan and electroencephalogram were normal. Lumbar puncture disclosed a protein level of 142 g/l, glucose 82 g/l and $0.3 \times 10^9/l$, cells all being mature lymphocytes; 68% of them were E-rosette-forming cells. The cerebrospinal fluid culture, a serologic test for syphilis, Ziehl-Neelsen test and the stain for *Cryptococcus neoformans* were all negative. Central nervous system involvement by sarcoidosis was considered. Treatment with prednisone, 60 mg/day, resulted in resolution of the neurologic symptoms and clearing of lymphocytosis in cerebrospinal fluid within 6 months. The lymph nodes, liver and

spleen all regressed. The lymphocytosis disappeared and lymphocyte counts stabilized around $2.5 \times 10^9/l$.

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Comments

Lymphopenia is a common finding in sarcoidosis [4] and was found to be due to a reduction in T lymphocytes [5]. Our patient presented with absolute mature lymphocytosis of $8\text{--}13 \times 10^9/l$ which persisted