

Internal Medicine Flashcard

An elderly man with diarrhea and weight loss

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1. Case description

A 77-year-old Japanese man presented to the author's department with diarrhea and weight loss (8 kg in the past 3 months). Vital signs were normal. Furthermore, abdominal examination was normal, and no skin lesions were observed. Esophagogastroduodenoscopy and total colonoscopy confirmed the absence of malignancy and inflammation; however, contrast-enhanced computed tomography revealed left inguinal lymphadenopathy. Laboratory evaluation showed white blood cell counts and serum lactate dehydrogenase (LDH) level were elevated at 16,500/μL (range ≤ 8,500) and 272 IU/L (range ≤ 229), respectively. Peripheral blood smear was shown in Fig. 1. What is the diagnosis?

2. Discussion section

The peripheral blood smear showed an atypical lymphocyte with “flower-shaped” nucleus, also known as a “flower” cell. An additional test detected a high titer ($\geq 1:8192$) of serum human T-lymphotropic virus type 1 (HTLV-1) antibody (range $\leq 1:15$). The patient was referred to a specialized hospital, and the diagnosis of adult T-cell lymphoma/leukemia (ATL) was made by an expert hematopathologist.

ATL, which is characterized by the presence of “flower” cells, is a rare T-cell lymphoproliferative neoplasm caused by HTLV-1 infection. Regions with the highest incidence of HTLV-1 include the southern and northern islands of Japan, the Caribbean, Central and South America,

intertropical Africa, Romania, and northern Iran [1]. Patients can be infected through transplacental transmission, mother's milk, blood transfusion, and by sexual transmission of the virus [2]. Among carriers of HTLV-1, the risk of developing ATL is only 2.5%, and the latency averages 55 years [2].

A subset of patients have a smoldering clinical course and long survival, but most patients present with an aggressive disease manifested by lymphadenopathy, hepatosplenomegaly, skin lesions, pulmonary infiltrates, hypercalcemia, lytic bone lesions, and elevated LDH

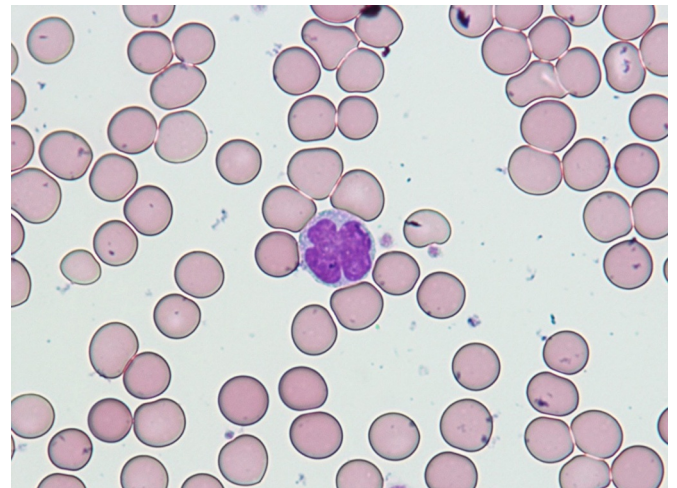


Fig. 1. Peripheral blood smear showed an atypical lymphocyte demonstrating marked nuclear irregularity.

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levels [2]. Gastrointestinal symptoms are nearly always related to opportunistic infection [3]. Although treatment with combination chemotherapy regimens can result in objective responses, aggressive ATL has an extremely poor prognosis [2].

Declaration of Competing Interest

None declared

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