An Asymptomatic Chronic Lymphocytic Leukemia Case Presenting at a Very Young Age

Çok Genç Yaşta Kronik Lenfositik Lösemi Tanısı Konulan Asemptomatik Bir Olgunun Sunulması

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ABSTRACT

Chronic lymphocytic leukemia (CLL) is a disease of advanced age with meanage ≥ 65 at diagnosis. In this paper, we aim to present an asymptomatic chronic lymphocytic leukemia case detected at very young age. A 24-year-old otherwise healthy male patient was found to have high white blood cell (WBC) count 46 x 10^9/l on routine blood tests. Peripheral blood smear was consistent with lymphocytosis with mature looking lymphocytes. A bone marrow biopsy and the flowcytometric immunophenotyping were performed. These findings and the pathological examination were consistent with CLL. To the best of our knowledge, our patient is the third young CLL case in the literature. This patient was diagnosed at an early stage of the disease and was asymptomatic. While the previously reported cases had poor prognosis, our patient did not possess any poor prognostic feature. As a result, although very infrequent, CLL can be diagnosed among young patients with lymphocytosis and should be kept in mind when treating these patients.

Key Words: Chronic lymphocytic leukemia, hematology, young age

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ÖZET

Kronik lenfositik lösemi (KLL) ileri yaş hastalığı olup ortalama tanı yaşı 65 yaş ve üzeridir. Bu yazıda çok genç yaşta KLL tanısı konulan asemptomatik bir olgunun sunulması amaçlanmıştır. 24 yaşında herhangi bir yakınması olmayan erkek hastanın, yapılan rutin kan tetkiklerinde lökosit sayımı 46 x 10^9/l olarak bulundu.Periferik kan yayması olgun görünümlü lenfositlerden oluşan lenfositoz ile uyumluydu. Hastaya flowsitometrik inceleme ve kemik iliği biyopsisi yapıldı. Bu bulgular ve patolojik inceleme bulguları doğrultusunda KLL tanısı konuldu. Bu olgu bizim bilgilerimize göre literatürdeki üçüncü en genç KLL olgusudur. Diğer iki olgu kötü prognoz ile karakterli iken, bizim olgumuz herhangi bir kötü prognostik özelliğe sahip değildi. Sonuç olarak, sıklığı az olmasına rağmen lenfositoz ile takip edilen genç hastalarda KLL akılda bulundurulması gereken bir hastalıktır.

Anahtar Sözcükler: Kronik lenfositik lösemi, hematoloji, genç yaş

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INTRODUCTION

The main causes of lymphocytosis in young patients are viral infections, physiological stress and drug reactions (1). CLL is a monoclonal disease of mature B lymphocytes which are positive for the surface markers CD5, CD19 and CD23. CLL is a disease of advanced age with mean age ≥ 65 at the diagnosis. Only 1.5% and less than 0.7% of the patients are younger than 40 and 30 years of age at the diagnosis, respectively (2,3).In this paper, we are reporting an asymptomatic chronic lymphocytic leukemia case detected at a very young age.

CASE REPORT

A 24-year-old otherwise healthy male patient was found to have a high white blood cell (WBC) count (46 x 10^9/l) on his routine blood tests. Seventy-five (75%) percent of the WBC was lymphocytes, hemoglobin (14.8 gr/dl) and platelet counts (323000/mm^3) were in normal ranges. In his physical examination, he had axillary (3x2 cm) and submandibular (1.5 x1cm) lymphadenopathy. He did not have hepatomegaly but he had a splenic enlargement with a size of 149 mm on ultrasonography. The patient did not have any history of medication.

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The laboratory tests did not reveal any evidence of a viral infection such as ebsteinbarrvirus, cytomegalovirus, hepatitisviruses, varicellazosteror, or HIV. The patient had an LDH level of 230 u/l. Peripheral blood smear was consistent with lymphocytosis with mature looking lymphocytes. Infiltration of mature lymphoid cells were observed in bone marrow aspiration. A bone marrow biopsy was performed, revealing a 50% atypical B cell infiltration with positive staining for CD20, CD5, CD23 and negative staining for cyclin-D1 in immunohistochemistry. The flow cytometric immunophenotyping revealed that the cells were $CD45^{+}$, $CD19^{+}$, $CD5^{+}$, $HLADR^{+}$ $CD20^{+}$, $CD23^{+}$ $CD24^{+}$, $FMC^{-/+}$, $CD25^{-}$, $Kappa^{-}$, $lambda^{-}$, $CD38^{-}$, $CD69^{-/+}$ and $ZAP70^{-}$. The cytogenetic examination did not reveal any chromosomal abnormality and FISH examination for trisomy 12, t(11;14), (14;18), 6q, 13q and 17p deletions were negative. These findings and the pathological examination were consistent with CLL.

DISCUSSION

The two youngest CLL patients reported in the literature were 19 and 23 years old (4,5). These patients had advanced disease and poor prognosis. Both patients were treated with allogeneic hematopoietic stem cell transplantation. According to our knowledge, our patient is the third young CLL case. This patient was diagnosed at an early stage of the disease and was asymptomatic. In CLL, among poor prognostic parameters, the following are found: the rate of lymphocyte is >80% in bone marrow aspiration and in a peripheric blood test the rate of prolymphocyte is >10%, the number of leukocyte is $>50x10^{9}$/l and there is a rise in LDH, cytogenetic abnormalities, and CD38 was >30% (6-8). Although the young cases reported by Gribben et al. (4) and Miguel et al. (5) had poor prognosis, our patient did not possess any poor prognostic parameters. However, he was followed up closely for any evidence of disease progression.

CONCLUSION

Although very infrequent, a diagnosis of CLL may be warrented with a young patient with lymphocytosis.

Conflict of Interest

No conflict of interest was declared by the authors.

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