



Clinical Image in Hematology

Promyelocytic Blastic Crisis in Chronic Myeloid Leukemia During Imatinib Treatment

İmatinib Tedavisi Sırasında Kronik Miyeloid Lösemide Gelişen Promiyelositik Blastik Kriz

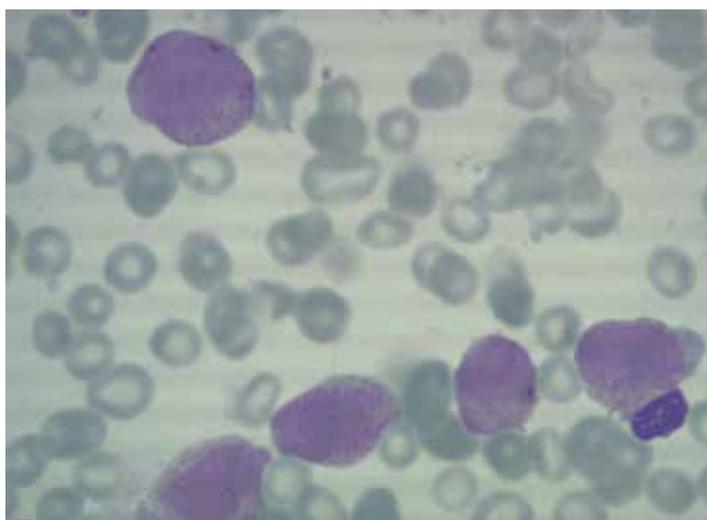


Figure 1. Leukemic cell morphology of bone marrow aspiration specimen (May-Grünwald-Giemsa).

An 82-year-old woman was admitted to our hospital presenting with febrile neutropenia. She had been diagnosed with chronic myeloid leukemia 2 years ago and had been on imatinib treatment since [1]. A month before admission she presented with malaise, anemia, and mild leukopenia; a bone marrow aspirate and biopsy performed 20 days before admission showed no alterations. Imatinib dosing was adjusted but mild cytopenia persisted. The patient presented with acute abdominal pain, fever, and shaking chills to the emergency department. On physical examination the patient was awake and appeared uncomfortable. She had pain in the left lower abdominal quadrant. Petechiae were evident on the lower limbs. Complete blood count revealed anemia, severe neutropenia, and thrombocytopenia (Table 1). Overt disseminated intravascular coagulation was present. Abdominal computed tomography showed acute

diverticulitis. The patient was started on broad-spectrum antibiotics. Informed consent was obtained.

A peripheral blood smear revealed more than 30% circulating promyelocytic blasts. A bone marrow aspirate and biopsy showed hypercellular marrow with myeloid hyperplasia and more than 90% myeloblasts (Figure 1). The blasts displayed hypergranular cytoplasm with bundles of Auer rods. PML/RAR- α was positive according to real-time PCR of the bone marrow. A diagnosis of promyelocytic blastic crisis was made [2,3,4,5].

Conflict of Interest Statement

The authors of this paper have no conflicts of interest, including specific financial interests, relationships, and/or affiliations relevant to the subject matter or materials included.

Table 1. Results of laboratory testing.

Variable	On admission	Day 12
Hematocrit (%)	18.4	25.6
White blood cell count (/mL)	560	1130
Neutrophils (%)	10	0
Lymphocytes (%)	85	0
Monocytes (%)	5	30
Platelets (/mL)	13.100	4900
Blasts present in peripheral blood (%)	0	70
Bacterial blood cultures	Negative	<i>E. coli</i> , <i>S. viridans</i>
Serum creatinine (mg/dL)	1.05	0.58
LDH (units)	167	492
Prothrombin (%)	40	49
Activated PTT (s)	42	32
Fibrinogen (mg/dL)	102	141
D dimer (ng/mL)	>5000	>5000
BCR/ABL RT PCR	0.006	-

PTT: Partial thromboplastin time, LDH: lactate dehydrogenase, RT PCR: reverse-transcription polymerase chain reaction.

Key Words: Acute promyelocytic leukemia, All-trans retinoic acid, BCR/ABL, PML/RAR- α , Imatinib

Anahtar Sözcükler: Akut promiyelositik lösemi, All-trans retinoik asit, BCR/ABL, PML/RAR- α , İmatinib

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