Letter to the Editor

A case with chronic eosinophilic leukemia resulting in blastic transformation

(2004;21(1):45-48)

Chronic eosinophilic leukemia resulting in blastic transformation

To the Editor,

In the last issue of Turkish Journal of Haematology Hacıhanefioğlu et al have reported a case with chronic eosinophilic leukemia resulting in blastic transformation. The presented patient suffered from fatigue, anorexia and weight loss. Hepatosplenomegaly had been determined in physical examination. There was no chromosomal abnormality in cytogenetic analysis. Platelet count of the patient was 690 x 10^9/L. The patient was not analyzed for visceral larva migrants and there was no history of drug use. A splenectomy was performed for diagnosis and prednisolone and hydroxyurea combination was preferred in the initial treatment[1].

There are four clinical subgroups of patients with hypereosinophilic syndromes. These are (1) chronic benign hypereosinophilic syndrome, (2) hypereosinophilic syndrome with organ involvements, (3) chronic eosinophilic leukemia (CEL), and (4) CEL with blastic transformation. CEL should always be considered in the diagnosis of patients presenting with moderate to severe eosinophilia when the other causes of eosinophilia have been excluded[2]. The diagnostic criterions of CEL are: (A) All of the followings: (1) Eosinophilia > 1500/mm^3 for over 6 months or death within the first 6 months of eosinophilia; (2) No evidence any disease with reactive eosinophilia; (3) Evidence of organ involvements. (B) Presence of a clonal abnormality; or (C) Any two of the followings: (1) Immature eosinophil precursors accounting for > 25% of the bone marrow or peripheral blood cells; (2) Myeloblasts > 5% of the bone marrow or peripheral blood cells; (3) Eosinophils with positivite naphtol chloroacetate esterase staining[3]. Splenectomy is not included in the above given diagnostic criterion of CEL. Also, it may be deleterious for the thrombocytosis in these patients[4].

Hydroxyurea may be used in the treatment of CEL. Approximality half of the patients respond to hydorxyurea, however, this response is usually transient. Stem cell transplantation should always be considered for young patients with an available donor[2,5]. Steroids may also be useful for the treatment of hypereosinophilic syndromes with eosinophilic end-organ damage[6]. Imatinib is a highly effective treatment modality for patients with hypereosinophilic syndromes, CEL, and other eosinophilia-associated myeloproliferative disorders. It may achieve complete responses in CEL. Therefore, imatinib should be considered in all patients with CEL, including younger ones without an available donor for stem cell transplantation[2,7].

REFERENCES

1. Hacıhanefioğlu A, Akkaş M, Tarkun P, Karakaya AT, Erçin C. A case with chronic eosinophilic leukemia resulting in blastic transformation. Turk J Haematol 2004;21:45-8.
2. Brito-Babapulle F. The eosinophilias, including the ididopathic hypereosinophilic syndromes. Br J Haematol 2003; 121:203-23.
3. Oliwer JW, Deol I, Morgan DL, Tonk VJ. Chronic eosinophilic leukemias and hypereosinophilic syndromes. Proposal of classification, literature review, and report of a case with a unique abnormality. Cancer Genet Cytogenet 1998; 107:111-7.
4. Jockovich M, Mendenhall NP, Sombeck MD, Talbert JL, Copeland EM 3rd, Bland KI. Long term complications of laparotomy in Hodgkin's disease. Ann Surg 1994;219:615-21.
5. Basara N, Markova J, Schmetzer B, Blau IW, Kiehl MG, Bischoff M, Kirsten D, Fauser AA. Chronic eosinophilic leukaemia: successful treatment with an unrelated bone marrow transplantation. Leuk Lymphoma 1998;32:189-93.
6. Hayashi S, Isobe M, Okubo Y, Suzuki J, Yazaki Y, Sekiguchi M. Improvement of eosinophilic heart disease after steroid therapy: successful demonstration by endomyocardial Biopsied specimens. Heart Vessels 1999;14:104-8.
7. Frickhofen N, Marker-Hermann E, Reiter A, Walz C, Jung B, Bauer H, Hochhaus A. Complete molecular remission of chronic eosinophilic leukemia complicated by CNS disease after targeted therapy with imatinib. Ann Hematol 2004; Feb 18.

Address for Correspondence:

Zahit BOLAMAN, MD

Adnan Menderes Üniversitesi Tıp Fakültesi
İç Hastalıkları Anabilim Dalı, Hematoloji Bilim Dalı
Aydın, TURKEY