Correspondence

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Cytogenetic Studies in Megakaryoblastic Leukaemia

A.		Berrebi
A.		Dvilanski
J.		Chemke

Rehovot

A. Berrebi, A. Dvilanski, J. Chemke, Haematology Unit, Kaplan Hospital, Rehovot; Soroka Medical Center, Beer-Sheva; Clinical Genetics Unit, Kaplan Hospital, Rehovot (Israel)

To the Editor,

Acute megakaryoblastic leukaemia is a rare form of leukaemia usually complicating myelofibrosis or chronic myeloid leukaemia (CML) [1, 2]. Only few cases have been reported and no specific chromosomal changes or markers have been described in these patients [1-4]. We report the chromosomal findings in 2 patients with micromegakaryoblastic leukaemia and compare them with the known findings in myelofibrosis, CML, and megakaryoblastic leukaemia.

The first patient was a 45-year-old female, followed during a period of 9 years for myelofibrosis. No therapy was given. 1 year after a splenectomy performed because of anaemia and ineffective transfusions and physical discomfort due to the splenomegaly, an atypical picture of leukaemia was detected, with 31×10^9 V1 white blood cells and 25% blast cells characterized as micromegakaryoblasts by cytochemistry and electronmicroscopy. Chromosome analyses were performed on PHA-stimulated lymphocytes and from short-term cultures from peripheral blood during the blastic phase. Slides were stained with conventional aceto-orcein, Giemsa banding and reverse banding patterns. All cells analysed revealed a modal number of 47 chromosomes with a trisomy of chromosome 9. In addition, the segment 1q25 was trisomic and in terminal translocation to one chromosome 9q. There was a balanced translocation of 13q14 to chromosome 12q.

The second patient was a 55-year-old female being treated with busulphan for a CML. 1 year after a splenectomy performed because of massive splenomegaly, she presented with an haematological picture compatible with megakaryoblastic leukaemia according to morphological, cytochemical and ultrastructural studies. Chromosomal analysis was per-

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formed on short-term cultures from bone marrow cells at the early stage of the disease and during the megakaryoblastic phase. Mitoses were studied with conventional aceto-orcein staining only. The first examination revealed a Phi chromosome in all analysed cells. In the second examination, mitoses with 48 chromosomes and two Phi

chromosomes were found in 2 cells while all other 14 cells revealed one Phi chromosome and a double trisomy 12 and 15.

The chromosome abnormalities observed in these 2 patients are quite different from the classical changes encountered in the two diseases (myelofibro-sis and CML) which preceded the blastic transformation. However, they do not seem to be specific for this special type of megakaryoblastic leukaemia. Chromosomal changes observed in myelofibrosis are not always predictive of the development of leukaemia and include nonrandom abnormalities described in a variety of preleukaemic and leukaemic states involving the long arm of chromosome 1, monosomy 5 or 11, as well as trisomy 8, 9 and 21 [5-7]. In megakaryoblastic leukaemia, hypodiploid cells, Phi chromosomes, unusual metacentric chromosomes and occasional hyperdiploid cells have been reported [1,3, 4]. In view of the rarity of this type of leukaemia, further serial cytogenetic studies in patients with myeloproliferative disorders and megakaryoblastic leukaemia will be helpful to evaluate the significance of these chromosomal abnormalities.

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Chronic Lymphocytic Leukemia following Treatment for Hodgkin's Disease

The present report describes a patient who, following successful treatment for Hodgkin's lymphoma (HL), presented 4 years later with chronic lymphocytic leukemia (CLL).

A 62-year-old male, diagnosed 4 years earlier as being afflicted with HL, nodular sclerosis type, stage

3B was treated with mantle irradiation (total dose of 4,000 R) and six courses of MOPP and entered into clinical remission. At present he complains of severe abdominal pains and profuse diarrhea. A physical examination revealed a diffuse enlargement of the lymph nodes and a huge, centrally located abdomi-