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Thalidomide in refractory myeloma patients: early changes in bone marrow cellularity

We describe the bone marrow changes in two patients with refractory multiple myeloma after thirty days of treatment with at low-dose thalidomide.

Both patients, resistant to several lines of chemotherapy, started thalidomide in an advanced phase of disease. A bone marrow evaluation before beginning thalidomide showed scarce cellularity with a marked infiltration of plasma cells (Figures 1a, 2a). After 30 days of treatment with thalidomide at the dosage of 100 mg/die the monoclonal component had not reduced, and the percentage of bone marrow plasma cells remained high. On the other hand, in both cases, we observed an increased cellularity with reappearance of erythroblasts and myeloid cells in various phases of differentiation (myelocytes and promyelocytes) (Figures 1b, 2b).

It could be argued that thalidomide, interfering with the cytokine network between myeloma and stromal cells might produce, as an early effect, an unblocking of normal hematopoiesis, before an overt reduction in bone marrow plasmacytosis.

Patrizia Zappasodi, Angela Lorenzi, Alessandro Corso Institute of Hematology, University of Pavia, Istituto Scientifico Policlinico San Matteo, Pavia, Italy

Correspondence: Alessandro Corso, M.D., Institute of Hematology, Policlinico San Matteo, 27100 Pavia, Italy. Fax: international +39-0382-502250 - E-mail: a.corso@smatteo.pv.it



Figures 1a, 2a: bone marrow aspirates before thalidomide therapy show scarce cellularity and marked plasma cell infiltration. Figures 1b, 2b: bone marrow aspirates after thirty days of thalidomide show increased cellularity and reappearance of erythroid and myeloid cells at various phases of differentiation.