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ERYTHROID BLAST CRISIS OF CHRONIC MYELOID LEUKEMIA

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A 70-year old woman was admitted with a diagnosis of pyelonephritis. The physical examination showed her to be lethargic and febrile (39°C). There was no liver or spleen enlargement. Laboratory findings were as follows: white blood cell count: 25×10^9, hemoglobin level: 11.2 g/dL, platelet count: 41×10^9/L, lacticodehydrogenase level: 4,100 IU/L (normal value < 350); erythrocyte sedimentation rate: 90 mm in one hour. Bone marrow examination revealed 49% of large blasts cells with one or more proeminent nucleoli in a rounded regular nucleus and abundant deep blue, budding and vacuolated cytoplasm (Figure 1). Chemotherapy was initiated with cytarabin and idarubicin. She became aplastic from day 7 to day 28 and suddenly died on day 29. Immunophenotyping of blasts cells shows expression of erythroid-associated antigens (ABH blood group antigens and the GplV thrombospondin receptor CD36), whereas B cell associated antigens (CD19, CD20, CD22), T-cell associated antigens (CD2, CD3) and MPO and myeloid antigens (CD13, CD14) were not detected. After 3 days of culture with erytropoietin and interleukin 3, leukemic cells which had not previously expressed spectrin acquired this antigen. Cytogenetic analysis of marrow revealed a t(19;22) translocation attesting the diagnosis of erythroid blast crisis of chronic myeloid leukemia.

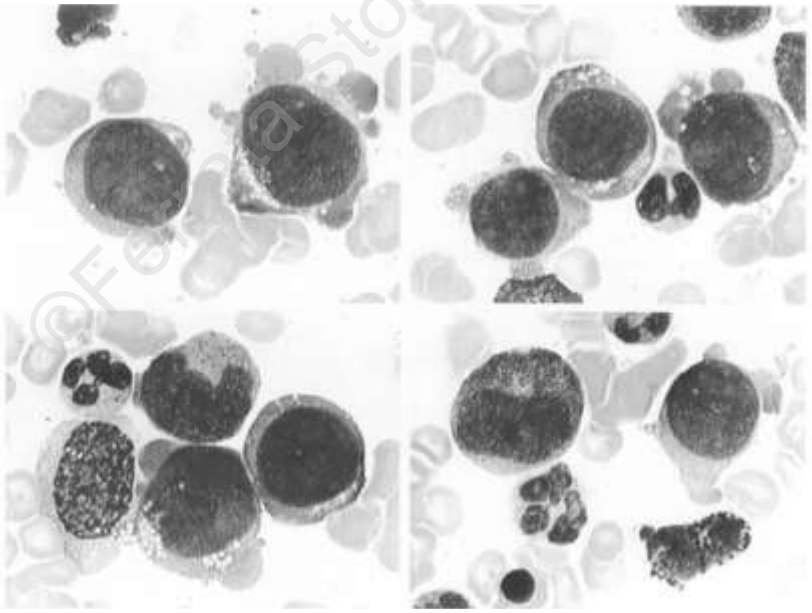

Figure 1. Leukemic cells from bone marrow show large blast cell with a round nucleus and deep blue cytoplasm. MGG×1000.

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