Atlas of Genetics and Cytogenetics in Oncology and Haematology

OPEN ACCESS JOURNAL AT INIST-CNRS

Case Report Section

Paper co-edited with the European LeukemiaNet

t(3;5)(q25;q35) as a sole anomaly in acute myeloid leukemia patient

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Published in Atlas Database: May 2007

Online updated version is available from: http://AtlasGeneticsOncology.org/Reports/0305ZamecnikovaID100025.html
DOI: 10.4267/2042/38514

Clinics

Age and sex: 36 year s old female patient
Previous History:
- no preleukemia;
- no previous malignant disease;
- no inborn condition of note.

Organomegaly :
- no hepatomegaly;
- no splenomegaly;
- no enlarged lymph nodes;
- no central nervous system involvement.

Blood

WBC: 1.9 x 10^9/l; Hb: 10.0 g/dl; platelets: 41x 10^9/l; blasts: 11%
Bone marrow: Hypercellular bone marrow, normal granulopoeisis depressed, blasts 31.6% (myelo 2.6%, metamyelo 2.8%, neutroph 6.8%, lymphocytes 37%, mono 0.2%, erythroblasts 19%). Blasts with moderate to lightly basophilic cytoplasm, azurophilic granules are present and occasional blasts contain Auer rods, 1-2 nucleoli are present.

Cytopathology classification

Cytology: Acute myeloid leukemia.
Immunophenotype: Not available.
Rearranged Ig or Tcr: -
Pathology: -
Electron microscopy: -
Precise diagnosis: Acute myeloid leukemia, M2.

Survival

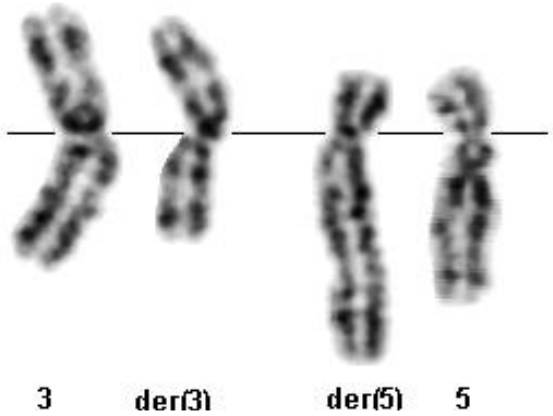
Date of diagnosis: (03-2007).
Treatment: Left for treatment abroad.
Complete remission was obtained. Comments: Not known as the patient left for treatment abroad.
Treatment related death:
Relapse
Phenotype at relapse
Status: Alive (03-2007);
Survival: 1 month.

Karyotype

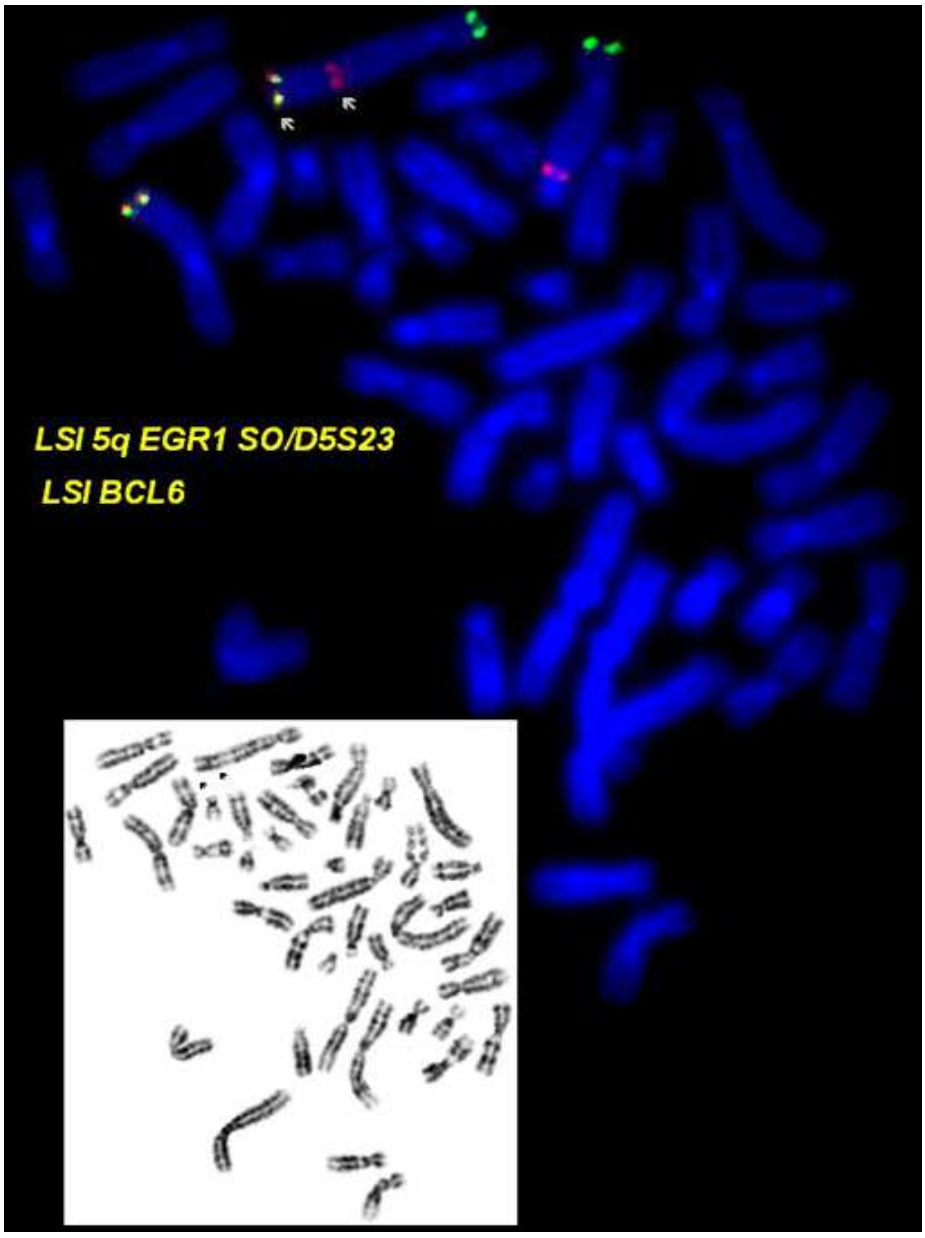
Sample: BM; Culture time: 24 h; Banding: G-band.
Results: 46,XY,t(3;5)(q25;q35)
Other molecular cytogenetic techniques: Fluorescence in situ hybridisation (FISH), with LSI 5q EGR1 SO/D5S23 SG) and LSI BCL6 DC probes obtained from Vysis (Downers Grove IL, USA).
Other molecular cytogenetics results: Analysis with LSI 5q EGR1 SO/D5S23 SG probe revealed one red and green signal on normal chromosome 5 and on der(5) chromosome. Analysis with LSI BCL6 DC probe revealed one fusion signal on normal chromosome 3 and a fusion signal on der(5) distal to EGR1 locus confirming the t(3;5).

Comments

A 36-years old Kuwaiti female was referred to our hospital due to pancytopenia and hair loss. Initial investigation showed: WBC 1.9 x 10^9l (neutr 35%, lymphocy 50%, mono 2%, eos 1%, myelo 1%), blasts 11%, NRBC 8/100. Based on laboratory findings the diagnosis of AML-M2 was made.
The chromosomal translocation t(3;5)(q25;q35) was observed only in individual cases. From the 5 described cases, 3 cases (2 male 1 female) were diagnosed with MDS and 2 cases with AML-M6 (1 male 1 female) suggesting the rearrangement with possible involvement of NPM/MLF1 genes is associated with myeloid malignancies.



Karyotype of the patient demonstrating the t(3;5)(q25;q35).



LSI BCL6 DC, Break Apart Rearrangement Probe exhibiting one red/green fusion on normal chromosome 3 and fusion signal on der(5) distal to EGR1. Hybridization with LSI 5q EGR1 SO/D5S23 SG probe on metaphase showing one red and green signal on normal and der(5) chromosome.

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This article should be referenced as such:

Zamecnikova A. t(3;5)(q25;q35) as a sole anomaly in acute myeloid leukemia patient. Atlas Genet Cytogenet Oncol Haematol.2008;12(2):185-187.