

Case Report Section

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Translocation t(8;12)(q13;p13) in a case with acute leukemia of ambiguous lineage

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Clinics

Age and sex: 2 years old female patient.

Previous History :

- no preleukemia;
- no previous malignant disease;
- no inborn condition of note.

Organomegaly :

- no hepatomegal;
- no splenomegal;
- no central nervous system involvement.

Blood

WBC: 254,4 x 10⁹/l; Hb:6,8 g/dl; platelets: 86x 10⁹/l; blasts: L2 morphology%.

Bone marrow: 89% of infiltration by L2 lymphoblasts.

Cytopathology classification

Cytology: Ambiguous lineage acute leucemia.

Immunophenotype: Blast cells were positive for T lineage antigens: CD2, CD7, cCD3; B lineage antigens: CD19 and cCD79a and myeloid antigens: CD13 and CD33. A minor (10%) myeloid blast population was also detected among the leukemic cells expressing MPO and CD117. Other positive markers were CD45, CD34, HLA-DR whereas CD10 and TdT were negative.

Rearranged Ig or Tcr: -

Pathology: -

Electron microscopy: -

Precise diagnosis: acute leukemia of ambiguous lineage.

Survival

Date of diagnosis: 04-2006.

Treatment: 12-ALLIC/BFM-PROTOCOL.

Complete remission was obtained.

Treatment related death: -

Relapse: -

Status: alive 07-2007.

Survival: 14 months

Karyotype

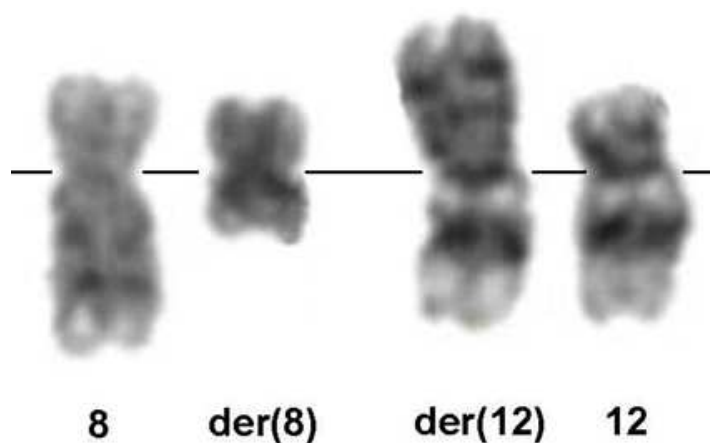
Sample: Bone marrow; Culture time: 24; Banding: G banding.

Results: 46,XX,t(8;12)(q13;p13)[16]/46,XX[4].

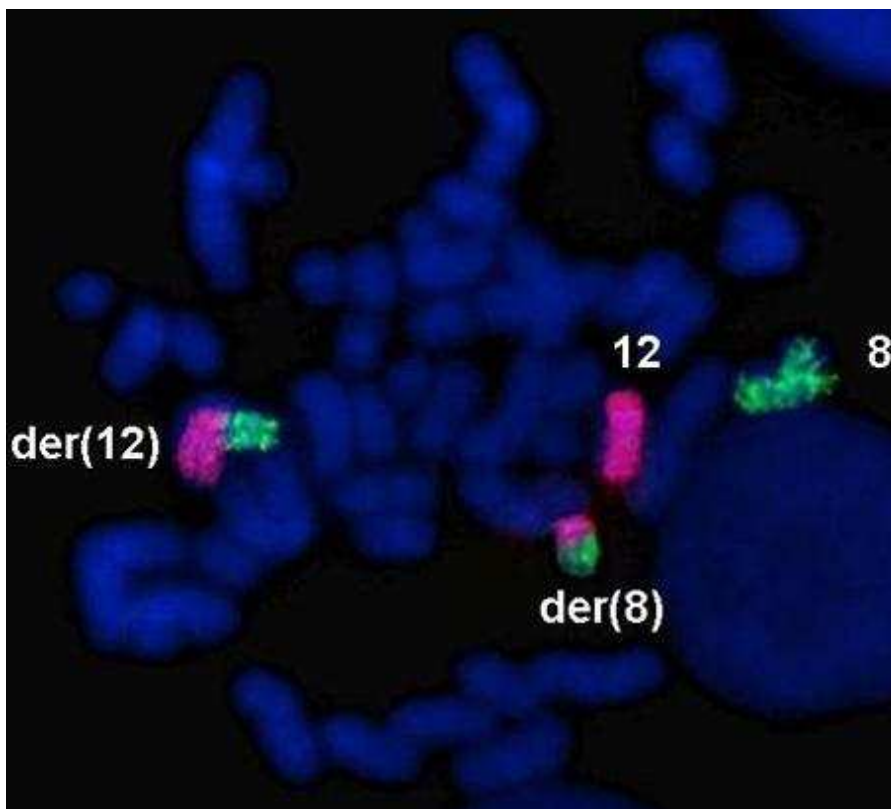
Karyotype at relapse: -

Other molecular cytogenetic technics: Fluorescence in situ hybridization (FISH) with painting probes (WCP 8, WCP 12) and LSI ES Dual Color Translocation Probes (TEL/AML1 and AML1/ETO) (Vysis, Inc.).

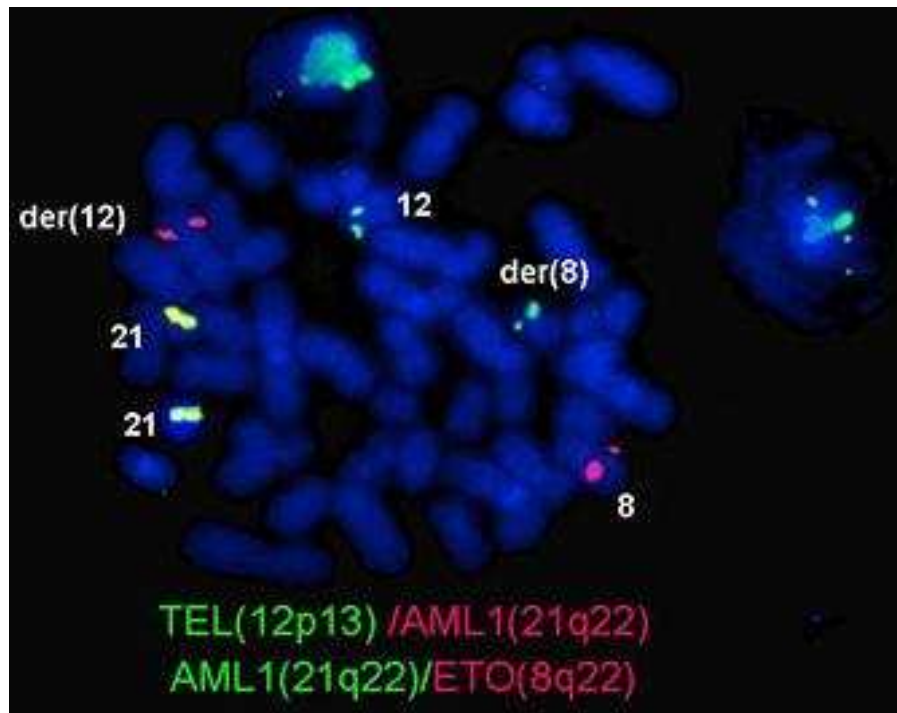
Other molecular cytogenetics results : ish t(8;12)(q13;p13) (WCP8+,WCP12+,TEL+,ETO-;WCP8+,WCP12+,ETO+,TEL-). FISH analysis with TEL/AML1 probe revealed that the gene ETV6 is in the derivate 8 and it is not involved in the translocation.



Partial GTG banded karyotype showing t(8;12)(q13;p13).



FISH with painting probes for chromosomes 8 (green) y 12 (red).



FISH with TEL/AML1 and AML1/ETO probes.

Comments

To our knowledge four cases of t(8;12)(q13;p13) have been reported in the literature. Three of them were described in childhood acute leukemia. The fourth case was described during disease progression in acute myelomonocytic leukemia with t(11;19). It was suggested that t(8;12) might play an important role in the relapse and lead to a poor prognosis. Our patient presented a bad response to prednisone and was considered of high risk group. At present she remains in complete remission.

References

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