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

The rare t(4;12)(q11;p13) in an elderly patient with de novo AML with multilineage dysplasia co-expressing stem cell markers

Sarah Moore, Sanjeev Chunilal, Jacqueline Beerworth

SA Cancer Cytogenetic Unit, Institute of Medical & Veterinary Science, Adelaide, South Australia (SM, JB); Department of Haematology, The Queen Elizabeth Hospital, Adelaide, South Australia (SC)

Published in Atlas Database: August 2002

Online updated version : http://AtlasGeneticsOncology.org/Reports/0412MooreID100005.html
DOI: 10.4267/2042/37943

Clinics

Age and sex
84 years old female patient.

Previous history
No preleukemia, No previous malignancy, No inborn condition of note

Organomegaly
No hepatomegaly, no splenomegaly, no enlarged lymph nodes, no central nervous system involvement

Blood

WBC: 30.2X 10^9/l
HB: 11.8g/dl
Platelets: 189X 10^9/l
Bone marrow: 20%

Cyto-Pathology Classification

Cytology
(FAB) M2 with maturation; myeloid/stem cell.

Immunophenotype
CD13+, CD33+, CD7+, CD34+, CD117+, HLA-DR+

Rearranged Ig Tcr: -

Pathology
Numerous mononuclear megakaryocytes. Active erythropoiesis. Active granulopoiesis, hypogranular neutrophils, giant band forms, donut nuclei, pseudo Pelger-Huet anomalies. Blasts have moderate nuclear: cytoplasmic ratio.

Diagnosis
De novo AML with multilineage dysplasia.

Survival

Date of diagnosis: 03-2002

Treatment: Palliative treatment with oral etoposide.
Complete remission: no
Treatment related death: no

Status: Death. Last follow up: 07-2002.

Survival: 4 months

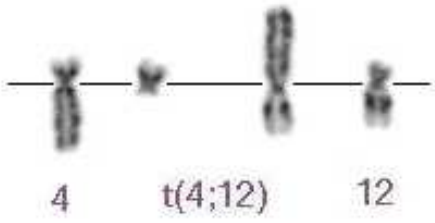
Karyotype

Sample: Bone marrow

Culture time: 24h

Banding: GTL

Results:
46,XX,t(4;12)(q11;p13)[15]/46,XX[5]



t(4;12)(q11;p13) GTL banded.

Comments

This elderly woman did not receive induction chemotherapy. Her disease rapidly progressed from a smouldering leukaemia to a florid form. Findings are consistent with previous reports of t(4;12) with stem cell leukaemia in older patients, and with rarity of additional cytogenetic changes.

References

Harada H, Harada Y, Eguchi M, Dohy H, Kamada N. Characterization of acute leukemia with t(4;12). Leuk Lymphoma. 1997 Mar;25(1-2):47-53

Sainty D, Arnoulet C, Mozziconacci MJ, De Pina JJ, Garnotel E, Lafage-Pochitaloff M. t(4;12)(q11;p13) in a CD7-negative acute myeloid leukaemia. Br J Haematol. 1997 Jan;96(1):210-2

Cools J, Bilhou-Nabera C, Wlodarska I, Cabrol C, Talmant P, Bernard P, Hagemeijer A, Marynen P. Fusion of a novel gene, BTL, to ETV6 in acute myeloid leukemias with a t(4;12)(q11-q12;p13). Blood. 1999 Sep 1;94(5):1820-4

Hamaguchi H, Nagata K, Yamamoto K, Kobayashi M, Takashima T, Taniwaki M. A new translocation, t(2;4;12)(p21;q12;p13), in CD7-positive acute myeloid leukemia: a variant form of t(4;12). Cancer Genet Cytogenet. 1999 Oct 15;114(2):96-9

Nathan PC, Chun K, Abdelhaleem M, Malkin D. Isochromosome (17)(q10) and translocation (4;12)(q12;p13) in a child with acute myeloid leukemia. Cancer Genet Cytogenet. 2001 Nov;131(1):82-5

This article should be referenced as such:

Moore S, Chunilal S, Beerworth J. The rare t(4;12)(q11;p13) in an elderly patient with de novo AML with multilineage dysplasia co-expressing stem cell markers. Atlas Genet Cytogenet Oncol Haematol. 2003; 7(1):66-67.