Atlas of Genetics and Cytogenetics in Oncology and Haematology

OPEN ACCESS JOURNAL AT INIST-CNRS

Leukaemia Section

Short Communication

t(17;20)(q21;q11)

Jean-Loup Huret

Genetics, Dept Medical Information, University of Poitiers, CHU Poitiers Hospital, F-86021 Poitiers, France. jean-loup.huret@chu-poitiers.fr

Published in Atlas Database: February 2017

Online updated version : http://AtlasGeneticsOncology.org/Anomalies/t1720q21q11ID1779.html

Printable original version : http://documents.irevues.inist.fr/bitstream/handle/2042/68760/02-2017-t1720q21q11ID1779.pdf

DOI: 10.4267/2042/68760

Abstract

Review on t(17;20)(q21;q11) in acute myeloid leukemia.

KEYWORDS

Chromosome 17; Chromosome 20; acute myeloid leukemia

Clinics and pathology

Disease

Acute myeloid leukemia (AML)

Phenotype/cell stem origin

One case was an AML with maturation (AML-M2/RAEB) and another case was an acute promyelocytic leukaemia (AML-M3).

Epidemiology

Only two cases to date, both female patients, one of them aged 59-years.

Clinics

The patient with an AML-M3 died six weeks after diagnosis.

Cytogenetics

Both cases presented with -5/del(5q); the AML-M3 also had del(18)(p11), +mar, +dmin, and other abnormalities, i.e. a complex karyotypic with double minutes.

Genes

RARA was not checked in any of the cases, although a M3 presenting with a breakpoint in 17q21 is very likely to bear a RARA fusion gene and protein.

The AML-M2/RAEB with a del(5q) implicated the IRF1 locus, which was consequently deleted.

In the AML M3 case, PCR revealed amplification of the MYC.

References

Green WB, Slovak ML, Chen IM, Pallavicini M, Hecht JL, Willman CL. Lack of IRF-1 expression in acute promyelocytic leukemia and in a subset of acute myeloid leukemias with del(5)(q31). Leukemia. 1999 Dec;13(12):1960-71

Mohamed AN, Macoska JA, Kallioniemi A, Kallioniemi OP, Waldman F, Ratanatharathorn V, Wolman SR. Extrachromosomal gene amplification in acute myeloid leukemia; characterization by metaphase analysis, comparative genomic hybridization, and semi-quantitative PCR. Genes Chromosomes Cancer. 1993 Nov;8(3):185-9

This article should be referenced as such:

Huret JL. Atlas Genet Cytogenet Oncol Haematol. 2018; 22(2). 51.