

Leukaemia Section

Short Communication

t(5;14)(q33;q32) PDGFRB/TRIP11

Jean-Loup Huret

Genetics, Dept Medical Information, University of Poitiers, CHU Poitiers Hospital, F-86021 Poitiers, France

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Clinics and pathology

Disease

Yet poorly known: 1 case of ANLL.

Clinics

Found at relapse with eosinophilia of a M2 ANLL with t(7;11).

Cytogenetics

Cytogenetics, morphological

So far found as an additional anomaly in a clone bearing a t(7;11)(p15;p15).

Genes involved and Proteins

PDGFRB

Location: 5q33

Protein

PDGFRB is the receptor for PDGFB (platelet-derived growth factor- β); membrane protein; belongs to the immunoglobulin superfamily.

CEV14

Location: 14q32

Protein

Contains a N-term leucine zipper and a C-term putative thyroid hormone receptor interacting domain.

Results of the chromosomal anomaly

Hybrid gene

Description

5' CEV14 - 3' PDGFRB

Transcript

10 kb fusion transcript (major) and other (minor) transcripts.

Fusion protein

Description

N-term leucine zipper from CEV14 fused to the transmembrane domain and the Tyr kinase domain of PDGFR β in C-term; the reciprocal transcript is not expressed; breakpoints at amino acids 1936 of PDGFR β and 567 of CEV14.

Oncogenesis

Ectopic constitutive tyrosine kinase activation of PDGFR β may occur.

To be noted

The above t(5;14)(q33;q32) with PDGFR β and CEV14 rearrangements must not be confused with the t(5;14)(q31;q32) with IL3 and IgH involvements found in ALL.

References

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