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Leukaemia Section
Short Communication

t(7;21)(p15;q22)

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Clinics and pathology

Disease

De novo acute myeloid leukemia (AML), type M2 with monocytosis or M4 in the case tested for RUNX1. Other cases presented with a chronic myelomonocytic leukemia evolving towards a M4-AML which may be therapy related, and with a M3-AML (promyelocytic leukemia) with t(15;17).

Epidemiology

Only three cases to date, 2 male and 1 female patients, aged 46, 70, ? (Koo et al., 1998; Jeandidier et al., 2006).

Cytogenetics

Additional anomalies

Sole anomaly in one case, presence of an unrelated clone in another. The t(7;21) accompanied the classical t(15;17)(q22;q11) in the M3-AML.

Genes involved and proteins

Note
The partner of RUNX1 is unknown.

RUNX1

Location
21q22

Protein
Contains a Runt domain and, in the C-term, a transactivation domain; forms heterodimers; widely expressed; nuclear localisation; transcription factor (activator) for various hematopoietic-specific genes.

References

Koo SH, Kwon GC, Chun HJ, Park JW. Cytogenetic and fluorescence in situ hybridization analyses of hematologic malignancies in Korea. Cancer Genet Cytogenet. 1998 Feb;101(1):1-6

Jeandidier E, Dastugue N, Mugneret F, Lafage-Pochitaloff M, Mozziconacci MJ, Herens C, Michaux L, Verellen-Dumoulin C, Talmant P, Cornillet-Lefebvre P, Luquet I, Charrin C, Barin C, Collonge-Rame MA, Pérot C, Van den Akker J, Grégoire MJ, Jonveaux P, Baranger L, Eclache-Saudreau V, Pagès MP, Cabrol C, Terré C, Berger R. Abnormalities of the long arm of chromosome 21 in 107 patients with hematopoietic disorders: a collaborative retrospective study of the Groupe Français de Cytogénétique Hématologique. Cancer Genet Cytogenet. 2006 Apr 1;166(1):1-11

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