t(8;19)(p11;q13)

Jacques Boyer

Laboratoire d'Hématologie, CH du MANS, France (JB)

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Identity

Note
Two distinct clinical syndromes have been associated with the 8p11-p12 region:
- Stem-cell myeloproliferative disorder with FGFR1 rearrangement
- AML M4 or M5 erythrophagocytosis-associated with MOZ rearrangement.
This t(8;19)(p11;q13) with MOZ involvement should not be confused with the t(8;19)(p11;q13) with FGFR1 involvement found in the stem-cell myeloproliferative disorder.
The partners of 8p11 are 8q13, 14q11, 16p13, 19q13, 22q13 and 3q27, 17q12 in a complexe translocation t(3;8;17)(q27;p11;q12).

Disease

Acute myelomonocytic or monocytic leukaemia (M4, M5a, and M5b) associated with erythro-phagocytosis by blasts noted to various degrees.

Epidemiology

Rare.

Cytology

Morphology feature observed in AML with t(8;16).

Prognosis

Probably poor.

Cytogenetics

Cytogenetics morphological

t(8;19) (p11;q13) is a variant of t(8;16) (p11;p13).

Additional anomalies

Two cases:
- 46,XX,t(8;19)(p11;q13.2)/idem,-16,-16q+
- 46,XX, t(8;19)(p11;q13) sole anomaly

Genes involved and proteins

MOZ

Location
8p11

Note
MOZ contains a LAP (Leukemia associated protein) zinc finger domain, a HAT domain (Histone acetyltransferase) and a acidic domain. Detection by FISH: YAC 176C9.

Protein
ZNF220

Monocytic leukemia zinc finger protein 2004 amino acids and 225 kDa nuclear protein, with 2 LAP/ PHD-type zinc fingers. MOZ is a histone acetyltransferase (HAT) and the founding member of the MYST family of HATs, a family that include proteins involved in cell cycle regulation, chromatin remodeling and dosage compensation. MOZ plays an important role during hematopoiesis with his transcriptional coregulator activity.

The partner of MOZ is unknown in this translocation.

Location
19q13
Result of the chromosomal anomaly

**Fusion protein**

*Note*

In the t(8;19) the fusion protein is unknown.

**References**


Pébusque MJ, Chaffanet M, Popovic C, Birmbaum D. [FGFR1 and MOZ, two key genes involved in malignant hemopathies linked to rearrangements within the chromosomal region 8p11-12]. Bull Cancer. 2000 Dec;87(12):987-94

*This article should be referenced as such:*