Leukaemia Section
Short Communication

\(t(8;16)(p11;p13)\)
Christine Pérot, Jean-Loup Huret

Laboratoire de Cytogénétique, Hopital Saint-Antoine, Paris, France (CP); Genetics, Dept Medical Information, University of Poitiers, CHU Poitiers Hospital, F-86021 Poitiers, France (JLH)

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Identity

\(t(8;16)(p11;p13)\) G- banding (left) - Courtesy Jean-Luc Lai (top left) and Charles D. Bangs (middle and bottom left), R- banding (top right) - Courtesy Jean-Luc Lai, and ideogram (bottom right) - Courtesy Charles D. Bangs.

Clinics and pathology

**Disease**
ANLL; t-ANLL

**Phenotype/cell stem origin**
M4, M5a, M5b; possible involvement of a granulomonocytic precursor; no preceeding MDS.

**Epidemiology**
Rare disease (<1% of ANLL); found in children (including infants) and young adults of both sexes.

**Clinics**
Disseminated intra vascular coagulation may be present; extramedullary infiltration; 20% of the cases could be therapy-related.
Cytology
Erythrophagocytosis, strong peroxidase and esterase activities.

Prognosis
Poor: remission may be obtained in half cases; infections, bleeding; survival is often less than 1 year but spontaneous remission has occurred (at least) once.

Cytogenetics

Additional anomalies
In half cases; +8, various; complex karyotype may be found.

Variants
Complex t(8;16;Var) involving a (variable) third chromosome have been described; 8p11 breakpoint with another partner as well, of which is the recurrent t(8;22)(p11;q13), which may involve P300 on 22q13 in the place of CBP: this translocation would therefore be an equivalent (not identical), and not a simple variant with hidden 16p13 involvement.

Genes involved and proteins

MOZ
Location
8p11

CBP
Location
16p13

Result of the chromosomal anomaly

Hybrid gene
Description
5' MOZ - 3' CBP

The t(8;16) has been cloned and shown to fuse the MOZ (monocytic leukemia zinc finger) gene at 8p11.2 to the CBP (CREB binding protein) gene at 16p13.3. The MOZ gene has also been found to be involved in variant translocations t(8;19)(p11;q13) and t(8;22)(p11;q13) and inv(8)(p11q13) translocations associated with M5/M4 AML. This translocation is associated with AML M5/M4. In the majority of cases it is associated with features of hemophagocytosis by leukemic cells, particularly erythrophagocytosis - Courtesy Georges Flandrin, CD-ROM AML/MDS G.Flandrin/ICG. TRIBVN.
**Fusion protein**

**Description**
N-term MOZ fused to most of CBP; 3722 amino acids; 415 kDa; combines the MOZ finger motifs (DNA binding) and acetyl transferase with the transcriptional coactivator from CBP; the reciprocal CBP-MOZ has no role (as it is out of frame).

**References**

This article should be referenced as such: