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Leukaemia Section
Short Communication

t(2;11)(p21;q23)

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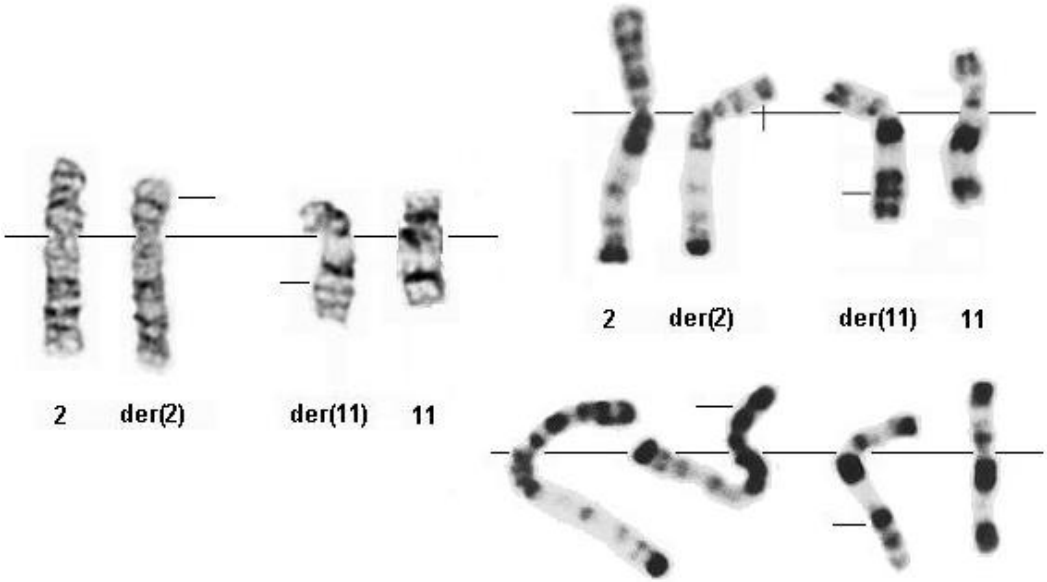

t(2;11)(p21;q23) G- banding (left) - Courtesy Eric Crawford, and R- banding (Editor).

Clinics and pathology

Disease

Myelodysplastic syndromes (MDS), acute non lymphocytic leukemia (ANLL) and acute lymphoblastic leukemia (ALL).

Phenotype/cell stem origin

20 cases were documented, 14 of them were MDS; in three cases, type of MDS was not described; the remaining cases were: 2 AISA, 5 RA and 4 RAEB; in 6 patients, MDS has transformed into ANLL (M1, M5a, M6 and unidentified); in 6 cases acute leukemia was diagnosed: 4 ANLL, 2 ALL; ANLL FAB-types were: M0 evolving into M4, M1, M2 and atypical M3.

Epidemiology

Male predominance: 13 M:7 F; the majority of patients (16 out of 20) were over 50 years of age and 8 of them were over 60 years of age.

Clinics

Variable.

Prognosis

Due to heterogeneity of cases and lack of molecular data, the prognostic importance of t(2;11)(p21;q23)

cannot be assessed; in 6 cases of MDS transformation into ANLL, MDS phase varied from 18 months to 5 years; in 4 out of 5 ANLL cases treated in 1986-1993, remission duration varied from 6 to 13 months.

Cytogenetics

Cytogenetics morphological

A high variability of breakpoints on both chromosome 2 (2p16-2p21) and chromosome 11 (11q13-11q25) were found by conventional cytogenetics.

Cytogenetics molecular

MLL gene involvement was observed in 2 out of 3 cases studied.

Additional anomalies

Additional abnormalities were observed in 10 out of 20 cases; in 8 cases, del(5)(q13q33) is found; it is of note, that deletions of 5q usually are not seen in cases with MLL-associated translocations.

Genes involved and proteins

Note

The gene involved in 2p is unknown.

MLL

Location

11q23

DNA/RNA

37 exons, spanning about 120 kb; 13-15 mRNA.

Protein

431 kD; transcriptional regulatory factor, nuclear localization; Contains two DNA binding motifs (a AT hook and zinc fingers), a DNA methyl transferase motif.

Result of the chromosomal anomaly

Hybrid gene

Description

Unknown.

Fusion protein

Description

Unknown.

References

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