

Leukaemia Section

Short Communication

12p13 rearrangements in treatment related leukemia

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Identity

Note: This data is extracted from a very large study from an International Workshop on treatment related leukemias - restricted to balanced chromosome aberrations (i.e.: -5/del(5q) and -7/del(7q) not taken into account per se), published in Genes, Chromosomes and Cancer in 2002.

Clinics and pathology

Disease

Treatment related myelodysplasia (t-MDS) or acute non lymphocytic leukaemias (t-ANLL).

Note

The study included 9 cases; t-MDS without progression to ANLL accounted for 2 of 9 cases, t-MDS with progression to ANLL for 1 case and t-ANLL for the remaining 6 cases; no case of acute lymphoblastic leukaemia.

Epidemiology

12p13 rearrangements were found in 2% of t-MDS/t-ANLL; sex ratio: 5M/4F.

Clinics

Age at diagnosis of the primary disease 40 yrs (range 11-64); age at diagnosis of the t-MDS/t-ANLL: 48 yrs (range 25-69). Median interval was relatively long: 81 mths (range: 18-223). Primary disease was a solid tumor in only 2 of 9 cases, and a hematologic malignancy in 7/9; treatment was chemotherapy (3/9), or both (6/9). Treatment included topoisomerase II inhibitors in 5 of 9 cases and alkylating agents in 8/9.

Prognosis

Median survival was very poor: 4 mths, with 15% of patients surviving at 1 yr, and none at 2 yrs.

Cytogenetics

Additional anomalies

12p13 rearrangements included: t(1;12)(q21;p13), t(4;12)(q12;p13), t(7;12)(p15;p13), t(8;12)(p12;p13), t(12;20)p13;q11, and t(12;22)(p13;q11) and other rearrangements. Complex karyotypes were found in 7 of 9 cases; -7/del(7q) and/or -5/del(5q) were found in 6 of 9 cases.

Result of the chromosomal anomaly

Hybrid gene

Description

5' ETV6 -3' partner where ETV6 is known to be involved.

References

Block AW, et al. Rare recurring balanced chromosome abnormalities in therapy-related myelodysplastic syndromes and acute leukemia: report from an international workshop. *Genes Chromosomes Cancer*. 2002 Apr;33(4):401-12

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