

Leukaemia Section

Mini Review

t(8;14)(q11;q32)

Jean-Loup Huret

Genetics, Dept Medical Information, UMR 8125 CNRS, University of Poitiers, CHU Poitiers Hospital, F-86021 Poitiers, France (JLH)

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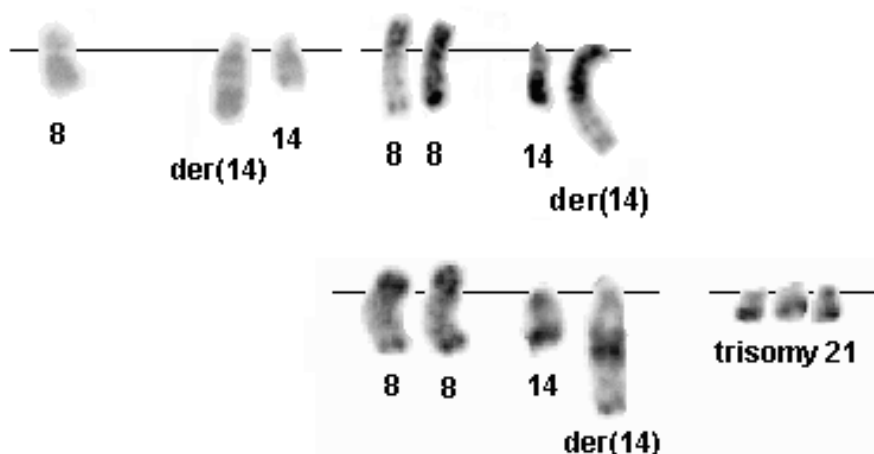
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Identity



-8, +der(14)t(8;14)(q11;q32) G-banding (left) - Courtesy Gitte Birk Kerndrup and Steen Rosthoj; der(14)t(8;14)(q11;q32) R-banding - Courtesy Pascale Cornillet-Lefebvre and Stephanie Struski (top), and with a constitutional trisomy 21 (bottom) - Courtesy Petr Balicek, Jana Rabasova, and Jiri Hak. More iconography can be found in the Case Report section (see below).

Clinics and pathology

Disease

Pre-B (CD10+) acute lymphoblastic leukemia (ALL) in most cases; chronic myelogenous leukemia (CML) very rarely; one case of histiocyte-rich B-cell lymphoma.

Etiology

Strikingly, 1/4 of cases are Down syndrome patients.

Epidemiology

More than 40 cases are known now; represents about 1/1000 cases of childhood leukemias; median age is 11

years (range 4-48), with 10% above 20 years; unbalanced sex ratio (2M/1F).

Clinics

Organomegaly is not frequent, central nervous system (CNS) involvement was not noted; WBC was $< 50 \times 10^9/l$ in most cases.

Prognosis

Probably not bad; a Kaplan-Meier from 22 (heterogenous) cases would show that 2/3 of patients survive; however, only half cases reach a 2 years follow up (row data are: 1, 5+, 6+, 7, 8+, 9, 9+, 10+, 11+, 23, 24+, 30+, 31, 32, 36+, 51+, 98+, 99+, 108+, 111+, 112+, and 123+).

Cytogenetics

Cytogenetics morphological

Sole (acquired) anomaly in 1/4 of cases; accompany a t(9;22)(q34;q11) in 20% of cases; unbalanced form with a der(14) t(8;14) in 20% of cases, indicating that the crucial event is likely to lie on der(14).

Additional anomalies

t(8;14) may be found with t(9;22) (see above); t(8;14) is accompanied by an acquired (not constitutional) +21 in 10% of cases; +X, +8, and del(13q) are also recurrently found with t(8;14).

Genes involved and proteins

Note

The gene involved in 8q11 is unknown; the gene involved in 14q32 is IgH, found rearranged in cases where it was tested.

To be noted

Case Report

A case of pre-B ALL with t(8;14)(q11;q32).

A case of Down syndrome with acute lymphoblastic leukemia and t(8;14)(q11;q32).

A new case of t(8;14)(q11;q32) in an acute lymphoblastic leukemia.

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