t(1;14)(q21;q32) FCGR2B/IGH

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Clins and pathology

Disease

Follicular lymphoma in one CD10+ case, but without a t(14;18)(q32;q21), bcl2 negative, and with a t(1;14)(q21;q32): follicular lymphoma with FCGR2B rearrangement and dup(1)(q21q25) in another case.

Epidemiology

These two cases with FCGR2B rearrangement were found among a panel of 76 non Hodgkin’s lymphomas.

Prognosis

May be associated with tumor progression.

Cytogenetics

Cytogenetics morphological

One case with 46, XX, t(1;14)(q21;q32), t(8;9)(q24;q13): progression to a diffuse large cell lymphoma with a complexe caryotype. An another case with FCGR2B rearrangement in a follicular lymphoma: the karyotype was complexe with dup(1)(q21q25), t(14;18)(q32;q21).

Genes involved and proteins

FCGR2B

Location

1q22

IgH

Location

14q32

Result of the chromosomal anomaly

Hybrid gene

Description

The translocation juxtapose the 5’ switch region og IGHG2 to a region upstream of FCGR2B in the der(1) chromosome. FCGR2B is deregulated by this translocation and FCGR2B b2 mRNA isoform is overexpressed.

Fusion protein

Note

No fusion protein.

Oncogenesis

It is possible that alteration in the b2/b1 mRNA isoforms ratio in B-cells may promote B cell survival. This anomaly is bcl2 deregulation-independent because FCGR2B has been shown to be a tumor-enhancing factor in non lymphoid cells in murine in vivo and in vitro models. Deregulation of FCGR2B expression can be considered as an additional growth advantage to the bcl2 deregulated B-cells.

References


This article should be referenced as such: