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Leukaemia Section

Short Communication

t(14;17)(q32;q21) IGH/IGF2BP1

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Abstract

IGH rearrangements are a common chromosomal abnormality seen in lymphoproliferative disorders, including ALL. Numerous translocation partners of IGH gene have been identified. Here we report a B-ALL case with a t(14;17)(q32;q21) IGH/IGF2BP1.

Keywords

IGH partner, t(14;17)(q32;q21), IGF2BP1, acute B lymphoblastic leukemia

Clinics and pathology

Disease

B-cell acute lymphoblastic leukemia (ALL)

Phenotype/cell stem origin

CD10+, CD19+, CD38+, cytoplastic CD22+ ALL

Epidemiology

Only one case, a 16 year old boy (Gu et al., 2014)

Clinics

Severe pancytopenia and an elevated lactate dehydrogenase (1048U/L); WBC was 2.7 X 10^9 with 20% blasts; no central nervous system involvement.

Cytogenetics

Cytogenetics morphological

An additional copy of the derivative 14 was found

Genes involved and proteins

IGH

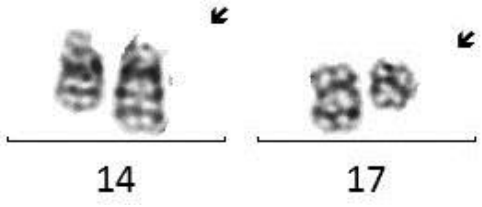
Location

14q32

IGF2BP1

Protein

IGF2BP1 is a member of Insulin-like growth factor 2 mRNA-binding protein family; pro-oncogenic RNA-binding; post-transcriptional regulation of gene expression (Bell et al., 2013; Lederer et al., 2014).



t(14;17)(q32;q21) G- Banding

Result of the chromosomal anomaly

Hybrid gene

Description

likely head-to-head fusion of IGF2BP1 with the IGH locus.

Fusion protein

Oncogenesis

Overexpression of the IGF2BP1 gene.

References

Bell JL, Wächter K, Mühleck B, Pazaitis N, Köhn M, Lederer M, Hüttelmaier S. Insulin-like growth factor 2 mRNA-binding proteins (IGF2BPs): post-transcriptional drivers of cancer progression? Cell Mol Life Sci. 2013 Aug;70(15):2657-75

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