Leukaemia Section

Short Communication

t(11;14)(q13;q32) in multiple myeloma
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Clinics and pathology

Disease
Multiple myeloma (MM) is a malignant plasma cell proliferation.

Phenotype / cell stem origin
Phenotype of mature differentiated B-cell, but also with CD56 expression, which is not found in normal plasma cells.

Epidemiology
Multiple myeloma's annual incidence: 30/10^6; mean age: 62 yrs; t(11;14) is found in 10-20% of cases of MM with an abnormal karyotype; t(11;14) is not found associated with particular sex or age group; found mostly in stage III MM.

Clinics
Bone pain; susceptibility to infections; renal failure; neurologic dysfunctions.

Pathology
MM staging:
- Stage I: low tumour cell mass; normal Hb; low serum calcium; no bone lesion; low monoclonal Ig rate;
- Stage II: fitting neither stage I nor stage II;
- Stage III: high tumour cell mass; low Hb and/or high serum calcium and/or advanced lytic bone lesions and/or high monoclonal Ig rate.

Prognosis
Evolution: multiple myeloma can evolve towards plasma cell leukaemia;
Prognosis (highly variable) is according to the staging and other parameters, of which are now the karyotypic findings.

Cytogenetics

Cytogenetics, morphological

Cytogenetics, molecular

FISH is indicated, as metaphases are arduous to obtain in such a disease implicating mature cells.

Additional anomalies
t(11;14) is part of a complex karyotype: accompanied with -13 or del(13q) in 'only' 1/4 of cases while -13/del(13q) is found in about 40% of MM cases with an abnormal karyotype; structural (and variable) anomalies of chromosome 1 are found in 1/3 of cases with t(11;14).

Variants
Complex three way translocations t(11;Var;14) have been described.

Genes involved and Proteins

BCL1
Location: 11q13

IgH
Location: 14q32

References


This article should be referenced as such: