Images in Clinical Hematology

Jumping translocation: an unusual cytogenetic finding in myeloid neoplasm

Daniela Borri a,*, Larissa Veloso Mendes Ommati b, Elvira Deolinda Rodrigues Velloso a,c

a Hospital Israelita Albert Einstein, São Paulo, SP, Brazil
b Centro de Hematologia de São Paulo (CHSP), São Paulo, SP, Brazil
c Hospital das Clínicas, Faculdade de Medicina, Universidade de São Paulo (HC FMUSP), São Paulo, SP, Brazil

ARTICLE INFO

Article history:
Received 16 March 2021
Accepted 7 June 2021
Available online 14 July 2021

Keywords:
cytogenetic
Jumping translocation
karyotype

Bone marrow karyotype of 86-year-old woman with myelofibrosis evolution from essential thrombocytopenia showed unbalanced translocation involving chromosome 1 and acrocentric chromosomes 14, 15 and 22 (Figure 1), configuring the phenomenon of Jumping translocation (JT). Twenty metaphases showed: 46,XX,der(14)t(1;14)(q12;p11.2)[11]/46,XX,der(22)t(1;22)(q12;p11.2)[3]/46,XX,der(15)t(1;15)(q12;p11.2)[2]/46,XX[4].

JT is a rare cytogenetic aberration that occurs when a donor segment chromosome breaks off and merges into two or more receptor chromosomes, resulting in an unbalanced translocation with gain of the donor chromosome...
This phenomenon shows genetic instability, despite not being associated with other chromosomal abnormalities and is associated with an unfavorable prognosis in myeloid neoplasms. Among the chromosomal gains, the most frequent is the partial trisomy 1q, as in the case described.

**Conflicts of interest**

The authors declare no conflicts of interest.

**REFERENCES**
