To the Editor:

In the transformation of chronic myelocytic leukemia (CML), myeloblastic and lymphoid blast crisis are most common. However, a few cases of promyelocytic blast crisis have been reported, in some of which the specific chromosome abnormality of both t(15;17) and (9;22) were detected in the transformed cells. We report here a case of CML with promyelocytic transformation that showed the

Fig 1. G-banded karyotype: 51, XY, +der(1)t(1;17) (p11;q11), +7, +8, +8t(9;22) (q34;q11), 22q−. Arrows indicate morphologically abnormal chromosomes.
the present case; lane 2, a typical APL carrying t(15:17); lane 3, normal control. In lanes 1 and 2, amplified products derived from PML-RARα fusion transcripts are clearly visible as etidium-stained bands. Slightly different sizes of the two are presumably explained by difference in breakpoints of chromosome 15 and/or alternative splicing of the PML gene. Numbers at left indicate marker length.

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I(1:17Mpl I:ql I) translocation with normal copies of chromosomes PML-RARα fusion transcripts are clearly visible as etidium-stained cells with normal karyotype in all of six APL cases studied. There-Then transformation to an acute promyelocytic leukemia occurred. Furthermore, RARα-PML chimera gene was found in leukemic cells with normal karyotype in all of six APL cases studied. Therefore, the fusion of RARα with PML gene might be an essential event for APL and promyelocytic blast crisis of CML, even in cases without showing morphologic abnormality on chromosomes 15 and/or 17.

ACKNOWLEDGMENT

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REFERENCES


Fig 2. Detection of PML/RARα fusion gene by RT-PCR. Amplified RT-PCR products were detected on a 1.5% agarose gel: Lane 1, the present case; lane 2, a typical APL carrying t(15:17); lane 3, normal control. In lanes 1 and 2, amplified products derived from PML-RARα fusion transcripts are clearly visible as etidium-stained bands. Slightly different sizes of the two are presumably explained by difference in breakpoints of chromosome 15 and/or alternative splicing of the PML gene. Numbers at left indicate marker length.

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Fig. 2. Detection of PML/RARα fusion gene by RT-PCR. Amplified RT-PCR products were detected on a 1.5% agarose gel: Lane 1, the present case; lane 2, a typical APL carrying t(15:17); lane 3, normal control. In lanes 1 and 2, amplified products derived from PML-RARα fusion transcripts are clearly visible as etidium-stained bands. Slightly different sizes of the two are presumably explained by difference in breakpoints of chromosome 15 and/or alternative splicing of the PML gene. Numbers at left indicate marker length.
Rearrangement of retinoic acid receptor alpha and PML in promyelocytic blast crisis of Ph1 chromosome positive chronic myelocytic leukemia with normal copies of chromosome 15

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