

## Successful Treatment of Life-Threatening Cerebral Bleeding Associated with Disseminated Intravascular Coagulation Using Recombinant Human Soluble Thrombomodulin in a Patient with Mixed Phenotype Acute Leukemia with t (9; 22) (q34; q11.2); *Bcr-Abl1*

PDF (Size: 1640KB) PP. 52-57 DOI: 10.4236/ijcm.2013.41011

### Author(s)

Naoki Takezako, Takashi Ishii, Akihisa Nagata, Naohiro Sekiguchi, Satoshi Noto, Akiyoshi Miwa

### ABSTRACT

Recently, mixed phenotype acute leukemia (MPAL) with t (9; 22) (q34; q11.2); *bcr-abl1* was described as one kind of acute leukemia of ambiguous lineage in the 2008 World Health Organization Classification of Tumors of Hematopoietic and Lymphoid Tissues. However, treatment strategy remains difficult for this uncommon MPAL. In addition, this type of MPAL is at high risk of tumor lysis syndrome (TLS) because of high chemo-sensitivity. Here, we report a MPAL with t (9; 22) (q34; q11.2); *bcr-abl1* case that suffered from life-threatening cerebral bleeding associated with disseminated intravascular coagulation (DIC) with TLS after *bcr-abl* positive acute lymphoblastic leukemia (ALL) type induction therapy who was successfully treated with recombinant human thrombomodulin (rhTM). This case reached complete remission without additive cerebral bleeding. In conclusion, *bcr-abl* positive ALL type induction therapy was effective for MPAL with t (9; 22) (q34; q11.2); *bcr-abl1* and rhTM was effective against DIC with TLS.

### KEYWORDS

Mixed Phenotype Acute Leukemia with t (9; 22) (q34; q11.2); *Bcr-Abl1*; Recombinant Human Soluble Thrombomodulin; Imatinib; Disseminated Intravascular Coagulation

### Cite this paper

N. Takezako, T. Ishii, A. Nagata, N. Sekiguchi, S. Noto and A. Miwa, "Successful Treatment of Life-Threatening Cerebral Bleeding Associated with Disseminated Intravascular Coagulation Using Recombinant Human Soluble Thrombomodulin in a Patient with Mixed Phenotype Acute Leukemia with t (9; 22) (q34; q11.2); *Bcr-Abl1*," *International Journal of Clinical Medicine*, Vol. 4 No. 1, 2013, pp. 52-57. doi: 10.4236/ijcm.2013.41011.

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