Treatment of Acute Myeloid and Lymphocytic Leukemia in Adults

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Abstract：A total of 50 patients with acute myeloid leukemia (AML) and 19 with acute lymphocytic leukemia (ALL) were newly diagnosed at Fukuoka University Hospital between January 1999 and December 2004. The number of AML patients increased progressively with age; the median age was 61 (range; 16–85), 26 of 50 patients (52%) were over 60 and 18 (36%) were over 70 years of age. On the other hand, no age-specific incidence was observed in ALL with a median age of 47 (range; 20–75). The number of males/females was 33/17 in AML, and 10/9 in ALL. There were 5 patients who developed AML after presenting with myelodysplastic syndrome (n=4) and aplastic anemia (n=1). However, no ALL developed as a secondary leukemia arising from other hematological disorders or previous chemotherapy. Twenty-nine of 50 patients (58%) with AML and 11 of 19 (58%) with ALL achieved a complete remission. The overall survival rates at 3 years were 34% for AML and 16% for ALL. In AML, the probabilities of remission and overall survival at 3 years decreased in line with the progression of age; 90% and 61% aged below 50, 46% and 37% between 50 and 69, and 33% and 16% over 70 years, respectively. Absolute resistance to induction chemotherapy and mortality within 14 days of diagnosis were observed in 0% and 11% of the patients aged below 50, and 42% and 19% aged over 50, respectively, thus suggesting that a low complete remission rate and a high treatment-related mortality were responsible for the poor outcome observed in the elderly patients with AML. In ALL, there was no apparent association between old age and a poor prognosis. Ten of 19 (53%) patients had the chromosome abnormalities related to a poor prognosis such as Philadelphia (Ph) chromosome and 11q23-related translocation. In 8 patients with Ph-positive ALL, only 38% patients achieved a complete remission and they all died within 3 years. The poor clinical outcome of ALL appeared to be associated with the high incidence of Ph-positive ALL. Imatinib mesylate, a selective inhibitor of the BCR-ABL tyrosine kinase seen in this disease, is a promising agent for improving the treatment outcome for Ph-positive ALL.

Key words：**Acute myeloid leukemia, Acute lymphocytic leukemia, Remission rate, Survival rate, Prognostic factor**