

中文題目：早期異體幹細胞移植可進一步改善帶有高白血球 ELN 分類預後良好急性骨髓性白血病患者之存活

英文題目：Improvement of survival by allogeneic stem cell transplantation in ELN favorable-risk adult AML patients with initial hyperleukocytosis

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Background

Acute myeloid leukemia (AML) patients of the 2017 European Leukemia Net (ELN) favorable-risk group generally do not require allogeneic stem cell transplantation (allo-SCT) in first complete remission (CR1). However, a substantial portion of these patients still relapses and dies of disease progression. In this study, we aimed to refine the risk assessment in ELN favorable-risk patients and to identify a subgroup of patients who might benefit from allo-SCT in CR1.

Methods

The study population comprised 176 ELN favorable-risk AML patients. Hyperleukocytosis (HL), defined as initial white blood cell counts above 50,000/uL, was observed in 35.2% of patients (n=62). We compared postremission treatment with chemotherapy and allo-SCT in patients with HL who achieved CR1 after induction chemotherapy. To minimize time to transplantation selection bias, survival analysis was limited to patients who remained in CR1 for at least 3 months (median time to HSCT) after achieving CR1.

Results

Among the HL and non-HL groups, there was no significant difference in gender, age, hemoglobin level and platelet counts at initial diagnosis. HL patients had higher incidences of *inv(16)*, *NPM1+ / FLT3-ITD-* and *CEBPA*

double mutations, but lower incidence of t(8;21) than non-HL group. HL patients had a lower CR rate (85.5% vs. 95.6%, P=0.037) and a higher relapse rate (54.7% vs. 29.4%, P=0.002). The median follow-up from the date of initial diagnosis was 76.8 months. HL patients had an inferior overall survival (OS) (median, 103.1 months vs. not reached (NR), P=0.024) and relapse-free survival (RFS) (median, 15.2 months vs. NR, P<0.0001) than non-HL patients. Among the HL patients who attained CR1 for at least 3 months (n=51), 8 patients receive allo-SCT and 43 patients had postremission chemotherapy. The relapse rate was higher in chemotherapy group than in allo-SCT group (65.1% vs. 0%, P=0.001). Allo-SCT in CR1 was associated with a significantly better RFS (median, NR vs. 15.5 months, P=0.009) and a trend toward better OS (median, NR vs. 103.3 months, P=0.092). The 5-year landmark analysis of RFS was 75% for patients undergoing allo-SCT and 34% for those receiving chemotherapy. On the contrary, in non-HL group, patients receiving postremission chemotherapy alone had similar OS (P=0.816) and RFS (P=0.402) when compared to those with allo-SCT in CR1.

Conclusions

HL predicts a higher relapse rate and poorer survival in ELN favorable-risk AML patients. Hyperleukocytotic AML patients of the ELN favorable-risk group benefit from allo-SCT in CR1 with respect to RFS. Our results provide evidence for new transplantation strategies in hyperleukocytotic ELN favorable-risk patients.

Key words: acute myeloid leukemia, hyperleukocytosis, transplantation, postremission therapy