307 OUTCOMES OF ALLOGENIC HEMATOPOIETIC STEM CELL TRANSPANTATION IN RELAPSED GOOD RISK ACUTE MYELOCYTIC LEUKEMIA (AML) CARRYING T(8;21) OR INV(16)

1 Seoul National University Boramae Hospital, Seoul, Korea; 2 Inha University Hospital, Incheon, Korea; 3 Seoul National University Bundang Hospital, Seongnam, Korea; 4 Seoul National University Hospital, Seoul, Korea; 5 Seoul National University Hospital, Seoul, Korea

Objectives: Patients with acute myelocytic leukemia (AML) with favorable cytogenetics such as t(8;21) and inv(16) are classified as good risk group and are not subject to hematopoietic stem cell transplantation (HSCT) frontline. However there are limited data following HSCT in relapsed good risk AML. Since allogeneic HSCT has been regarded traditionally as the only curative option in this population, we evaluated the outcomes of the patients who were treated with allogeneic HSCT in relapsed good risk AML carrying t(8;21) or t(8;21).

Methods: We evaluated the outcomes of 22 consecutive patients who underwent allogeneic HSCT with either myeloablative (n = 17) or reduced-intensity conditioning (RIC) regimen (n = 5) between January 1995 and May 2007 at Seoul National University Hospital.

Results: Among 22 patients (median age 33, 18–70), 13 patients were classified as AML with t(8;21), 9 patients as AML with inv(16). 13 patients received sibling donor transplantation and the remaining 9 patients received unrelated donor transplantation. Median follow up duration was 8.3 months (range: 5.9 – 10.7 months). 20 patients attained remission after HSCT and 10 patients relapsed after remission with HSCT, 8 (61.5%) with t(8;21) and 2 (22.2%) with inv(16). At the time of analysis, only 7 patients are alive (3 patients (21%) with t(8;21), 4 patients (44%) with inv(16). 2 patients with inv(16) were lost to follow up. 13 patients (61.5%) expired, 10 with (t(8;21) and 3 with inv(16). 9 patients with myeloblastic conditioning regimen and 4 patients with RIC regimen expired. There was no statistical difference between the myeloblastic and RIC regimen groups (p = .14). The major causes of death were relapse (53.8%, 7 patients), infection (23%, 3 patients) and GVHD (23%, 3 patients). 3-year survival rate was 43.8%. However, in patients with t(8;21) AML (n = 13), 3-year survival rate was 28.7%. On the contrary, in patients with inv(16) AML (n = 9), 3-year survival rate was 65.8%.

Conclusion: Patients with relapsed favorable risk AML showed divergent outcomes after allogeneic HSCT according to cytogenetic abnormalities. Patients with relapsed t(8;21) AML particularly exhibited high relapse rate and poor prognosis after allogeneic HSCT which is similar to treatment outcome of poor risk group AML. New treatment approaches including frontline HSCT with either allogeneic or autologous approaches should be tried in a prospective setting in this population.