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ABSTRACT SHARING
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HEMATOPOIETIC STEM CELL TRANSPLANTATION IN ACUTE MYELOID LEUKAEMIA – LONG TERM OUTCOME A SINGLE CENTRE EXPERIENCE

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Background

Hematopoietic Stem Cell Transplantation (HSCT) is the preferred consolidation therapy for patients with Acute Myeloid Leukaemia (AML) in first complete remission (CR1). We examined the relevant long-term outcomes in our local patient cohort.

Materials and Methods

We retrospectively reviewed the data for all patients with AML who have undergone HSCT in Hospital Ampang over a 17-years period between 1st September 2000 until 31st June 2017 from our electronic record. Patients were further stratified based on the number of high-risk features at presentation, not achieving complete remission (CR) following induction chemotherapy and favorable genetics. Outcome data including mortality (Overall survival (OS) and non-relapse mortality (NRM)) and morbidity (progression free survival (PFS)) were recorded and analyzed.

Results

A total of 327 patients were identified. The commonest type of HSCT performed is Matched-Sibling Donor (MSD) Allogeneic Stem Cell Transplantation (AlloSCT) 68.5% (n=224) followed by Autologous SCT (AutoSCT) 19.6% (n=64). The overall 5-years and 10-years OS is 48.5% (42.9; 53.9) and 44.2% (37.5; 50.6) respectively.

The 3-years and 5-years OS for AutoSCT is 46.8% (34.2; 58.4) and 44.9% (32.4; 56.6) respectively and 54.8% (48.0; 61.1) and 52.8% (45.9; 59.3) respectively for MSD AlloSCT. The 3-years OS for Haplo-identical Stem Cell Transplantation (HaploSCT), Matched Unrelated Donor (MUD) AlloSCT and Umbilical Cord Blood (UCB) transplantation is 22.2% (6.9; 42.9), 45.7% (20.1; 68.3) and 16.7% (0.7; 51.7) respectively. The difference in OS for AutoSCT, MSD and MUD is statistically significant compared to HaploSCT and UCB transplantation. The NRM for AutoSCT and AlloSCT is 1.6% (1/64) and 12% (32/263) respectively. The 5-years and 10-years OS for patients transplanted in CR1 is 52.5% (45.8; 58.8) and 47.9% (39.2; 56.2) respectively while the 5-years and 10-years OS for patients transplanted not in CR1 is 49.2% (36.7; 60.6) and 49.2% (36.7; 60.6) respectively which is not statistically significant. The 3-years and 5-years OS for patients without high-risk factors is 52.1% (45.2; 58.6) and 50.9 (44.0; 57.4) respectively; and 46.8% (37.1; 55.8) and 43.6% (33.8; 53.1) respectively for patients with high-risk factors is which is not statistically significant.

Conclusion: MSD AlloSCT should be offered to all patients with AML in CR1 even in those with favorable genetics. In the absence of alternative donors, AutoSCT remained a feasible option.

Key wards: Acute Myeloid Leukaemia, Autologous Hematopoietic Stem Cell Transplantation, Allogeneic Hematopoietic Stem Cell Transplantation