P1326 FACTORS ASSOCIATED WITH THE OUTCOME OF ALLO-HSCT FOR ADVERSE-CYTOGENETIC RISK ACUTE MYELOID LEUKEMIA

Topic: 22. Stem cell transplantation - Clinical

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Background: Allogeneic hematopoietic stem cell transplantation (Allo-HSCT) remains the unique intention-curative consolidation strategy in patients with Acute Myeloid Leukemia (AML) with unfavorable cytogenetic risk. It is a high-cost procedure with significant transplant-related mortality (TRM), therefore, the correct selection of candidates for allo-HSCT resembles as a crucial issue.

Aims: To describe the outcome of this procedure and to identify those patients who could obtain a better benefit. The primary endpoint was Overall Survival (OS) and secondary endpoints were relapse-free survival (RFS), cumulative incidence of Graft-versus-host disease (GVHD), cumulative incidence of relapse and (TRM).

Methods: We conducted an observational retrospective study in patients with adverse-risk cytogenetically defined AML (Upon the European LeukemiaNet 2017 criteria and the results of the Next Generation Sequencing) who underwent a first allo-HSCT in two tertiary referral centers between 2010 and 2020.

Results: We analyzed 82 patients with a median age at the moment of transplant of 55 (R 22-73) years. The median time from diagnosis to transplant was 5 (IR 4-7) months. Forty-two (51.2%) were women. Twenty-six patients (31.7%) had an identical HLA sibling donor and 37 (45.1%) had an unrelated HLA identical donor. A myeloablative conditioning was performed in 60 (51%) patients and in 48 (59.8%) the source of HSC was bone marrow. The majority (81.7%) had a first complete remission (CR1) at the moment of transplant and 13.4% had a partial response or a refractory disease (PR/RD). The 41.5% patients had a low comorbidity index score (HCT-CI<3).

With a median follow up of 36 months, the OS at 1 and 3 years was 67% (95% CI 64-66%) and 48% (95% CI 45-51%) respectively. The RFS at 1 and 3 years was 62% (95% CI 61-63%) and 45% (95% CI 43-47%), the cumulative incidence of relapse at 1 and 3 years was 18% (95% CI 11-28%) and 29% (95% CI 19-40%) and the TRM at 1 and 3 years was 21% (95% CI 13-30 %) and 28% (95% CI 19-39%) respectively.

The cumulative incidence of acute GVHD grade III-IV at day +100 was 17% (95% CI 9-26%). The cumulative incidence of moderate-severe chronic GVHD at 1 and 3 years was 21% (95% CI 13-30 %) and 31% (95% CI 21-42%) respectively.

There were no differences in OS regarding age (p=0.2), sex (p=0.9), HCT-CI score (p=0.7), type of donor (p=0.4), acute GVHD (p=0.5), HSCT source (p=0.06), conditioning (p=0.04) and subtype of ELN2017 (p=0.9).

A worse OS was observed in patients with PR/RD (HR 1.5 95% CI 1.2-1.9) (p<0.01) compared to those in first complete remission. The OS at two years was 28% (95% CI 26-30) and 59% (95% CI 58-60) respectively (Figure 1).

Sixty-six patients were analyzed for OS depending on the development of cGVHD. The OS at 2 years of the patients who did not develop cGVHD (n=32) was 58% (95% CI 56-60) of those with a mild cGVHD (n=10) was 85% (95% CI 83-87) of those with a moderate cGVHD (n=15) was 79% (95% CI 77-81) and of those who develop a severe cGVHD (n=9) was 64% (95% CI 61-67). Therefore, a worse OS was observed in patients who did not develop...
cGVHD or had a severe grade compared to those who had a mild or moderate cGVHD HR 5 (95% CI 1.8-15) (p<0.01).

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Summary/Conclusion: In our series, Allo-HSCT in adverse-cytogenetic risk AML are associated with better OS when it is performed in first complete remission and its benefit is unclear performed in partial response or in a refractory disease, where other strategies should be considered. The development of mild or moderate cGVHD was associated with a better overall survival.