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ELEVENTH ANNUAL MEETING

IMPACT OF EARLIER ADMINISTRATION OF CALCINEURIN INHIBITORS IN HAPLOIDENTICAL STEM CELL TRANSPLANT ON CYTOKINE RELEASE SYNDROME AND TRANSPLANT OUTCOMES

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INTRODUCTION

Patients undergoing allogenic hematopoietic stem cell transplantation are always at risk to develop serious adverse events like Cytokine Release Syndrome [CRS] and Graft vs. Host Disease [GVHD].

AIM

To evaluate the potential beneficial effect of starting calcineurin inhibitors [CNIs]and mycophenolate mofetil [MMF] before post-transplant cyclophosphamide [PTCy] to maintain PTCy-induced tolerance in patients undergoing haploidentical allogeneic hematopoietic stem cell transplant [haplo-HSCT].

METHOD

Medical records of patients with hematological malignancies who underwent haplo-HSCT and received CNI and MMF before PTCy were reviewed. Disease risk was evaluated according to the refined disease risk Index. CRS was graded according the ASTCT grading system. The cumulative incidences of acute and chronic graft versus host disease [AGVHD and CGVHD] and relapse, were assessed via Gray test. Overall survival [OS] and relapse-free survival [RFS] were estimated using the Kaplan-Meier method.

RESULTS

- A total of 41 patients were included; median age was 41 years. 24 patients (59%) had High-Risk disease. 61% of patients received MAC. Stem cells were collected from peripheral blood in majority (97.5%) of patients. Median follow-up time was 21 months.

- Only 1 patient (2.4%) developed graft failure.
- Median time to neutrophil and platelet engraftment was 16 and 17 days respectively.
- 22 (54%) developed CRS, grade (1) in 20 (95.1%) and (2) in 1 (4.9%).
- Cumulative incidence of grade II-IV, grade IV AGVHD and moderate to severe CGVHD were 34.1%, 7.3% and 14.6% respectively.
- RFS rates at 100 days and 3 years were 90.3% and 53.4% respectively , figure (1)
- 3-year cumulative incidence of relapse was 26.6%.
- Median time to relapse 217 (range: 42-654) days. 3-year NRM was 22%.
- 3-year OS rate was 67%.
- Development of CRS was associated increased risk for AGVHD (72.7% vs 31.6%, p=0.011).

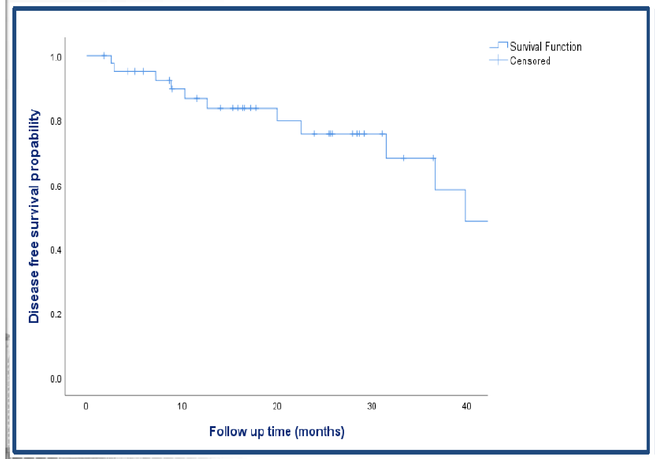


Figure (1): Disease free survival

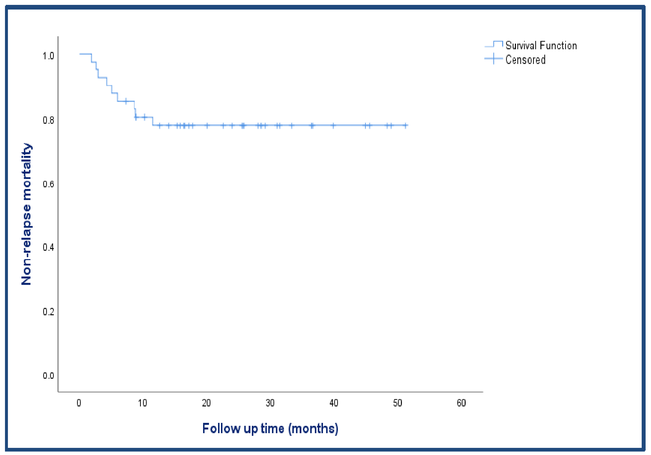


Figure (2): Non-Relapse Mortality

CONCLUSIONS

- ❑ Earlier administration of CNIs and MMF in haplo-HSCT may reduce the incidence and severity of CRS without increasing the risk of relapse or GVHD.
- ❑ Development of CRS significantly correlated with Acute GVHD.

Further studies are needed to optimize GVHD prophylaxis in this group.

CONTACT INFORMATION

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