Outcomes Associated with BEAM Conditioning Followed by Autologous Stem Cell Transplant in High-Risk Geriatric Patients

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INTRODUCTION

• Over half of the cases of Non-Hodgkin Lymphoma (NHL) are in adults over 65, and the incidence in this age group is increasing.
• For aggressive and relapsed/refractory NHL, high dose chemotherapy followed by autologous stem cell transplant (ASCT) remains standard of care.
• CIBMTR data have demonstrated that performance status (PS) and comorbidities are better predictors than age of transplant-related mortality and overall survival.
• Few studies have reported on safety and outcomes for elderly patients with significant comorbidities who undergo BEAM conditioning followed ASCT.

METHODS

• We performed a single-center retrospective chart review of 51 patients >60 years old with NHL undergoing ASCT with BEAM conditioning.
• Our emphasis was on toxicities as well as relapse-free and overall survival related to HSCT-CI risk category with low 0, intermediate 1-2 and high 3+

RESULTS

• In our cohort, 54.9% of patients were categorized as high risk based on HSCT-CI with 33.3% intermediate and 11.8% low risk.
• There was no statistically significant difference in number of toxicities between low, intermediate and high risk patients nor in the percentage of patients who developed grade 3-4 toxicities (83.3%, 88.2% and 78.6% respectively) or febrile neutropenia (p=0.72).
• For all patients, OS was 100% at 60 days, 87.8% at 1 year, 78.3% at 2 years. There was no statistically significant difference in OS between low, intermediate, and high-risk patients (100%, 82.4% and 88.4% at 1 year; 66.6%, 82.4%, and 79.0% at 2 years).
• RFS was 100% at 60 days, overall RFS at 1 year was 54.9% and 23.5% at 2 years with no statistically significant difference between low, intermediate and high risk patients (100%, 52.9% and 46.4% at 1 year; 16.7%, 35.3% and 17.9% at 2 years).
• Length of hospital stay, time to neutrophil and platelet engraftment was not significantly different among the three groups.

CONCLUSION

• BEAM is an effective conditioning regimen for older, high-risk patients as determined by HSCT-CI with comparable rates of grade 3-4 toxicities as well as OS and RFS to low and intermediate risk patients from the same age group.
• These data indicate that with good supportive care patients with multiple comorbidities can still have comparable outcomes to lower risk patients.