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Higher Relapse Rate and Resource Utilization With Ara-C Consolidation Chemotherapy Alone Compared With Hematopoietic Cell Transplantation in First Remission in a Cohort of Younger Adults With Acute Myeloid Leukemia With t(8;21) (q22;q22.1)

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INTRODUCTION

Acute myeloid leukemia (AML) with t(8; 21) is classified as a favorable risk subtype, and high-dose Ara-C (HIDAC) consolidation is the recommended postremission therapy (PRT). Cohort of CBF-AML has revealed a concerning relapse rate reaching 40%.

AIM

When implementing a strategy of sequential HIDAC consolidation at our institution, we found an unacceptably high rate of relapse, so we decided to compare other options as post remission therapy including Auto and Allo Hematopoietic cell transplantation to look for survival benefit, progression free survival and relapse rate.

METHOD

A retrospective analysis was carried out of approved AML registry studies. All patients with AML with karyotypic or FISH confirmation of t(8;21) were included. We analyzed outcomes of those patients treated at our institution for the impact of prognostic factors and postremission therapy on survival.

RESULTS

We identified 59 patients (median age 23 years [range, 14-57 years]). Following standard induction with idarubicin and cytarabine (3+7) ± etoposide, the complete remission (CR) rate was 93%. The 5-year event-free survival (EFS) for the entire cohort was 38.5%; overall survival (OS) was 50%. OS was superior in patients with WBC <20 × 10^9/L and in those treated after the year 2005. Forty-nine patients (83%) received PRT in the first CR (CR1); the relapse rate was significantly higher in patients receiving only HIDAC as PRT than in those receiving a transplant (70% vs 30%, *P*=.03). OS for HIDAC, autoHCT, and alloHCT was 55.9%, 77.5%, and 64.6% (*P*=NS) respectively. Patients receiving an autoHCT had lower monetary cost and bed utilization in the first year of therapy.

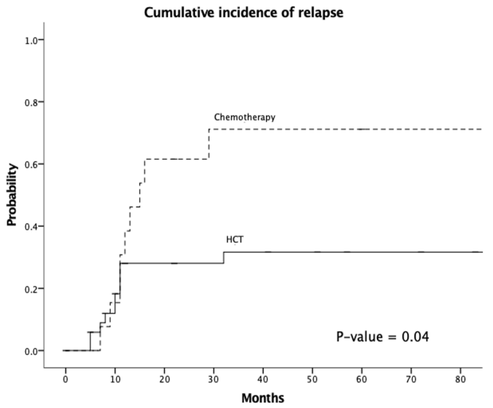


Figure 1 Cumulative incidence of relapse by post remission therapy. Abbreviations: HCT= hematopoietic cell therapy

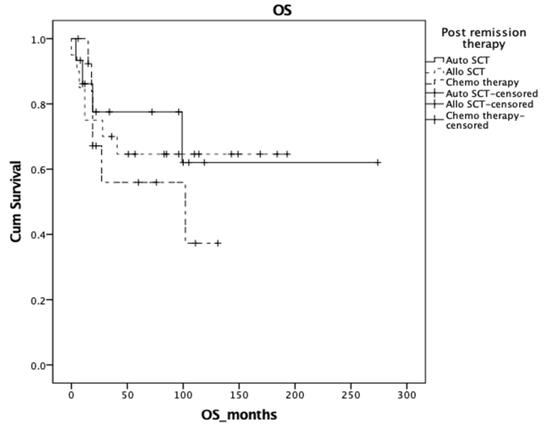


Figure 2. OS of patients by post remission therapy arms. Allo = Allogeneic hematopoietic cell therapy; Auto = Autologous hematopoietic cell therapy; Chemo = chemotherapy consolidation.

CONCLUSIONS

We report that young Middle Eastern patients with AML t(8;21) have modest outcomes, with a high relapse rate with HIDAC chemotherapy alone. In such a setting, transplantation in first remission may be justified as a therapeutic option; prospective studies are required to make further recommendations.

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