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abstract

Response of Relapsed/ Refractory Pediatric AML to Clad-AraC

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Response of Relapsed/ Refractory Pediatric AML to Clad-AraC

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Introduction: Relapsed/refractory (R/R) acute myeloid leukemia (AML) in children have poor outcome with no clear-cut guidelines on preferred regimen due to paucity of data in this cohort. Cladribine + Cytarabine (Clad-AraC) can be used in children with R/R AML.

Methodology: Between January 2016 to December 2022, 74 children less than 15 years of age, with R/R AML received 119 cycles of Cladribine (9 mg/m2/dose for Day 1- 5) with Cytarabine (500mg/m2/dose Day 2-6). Complete remission (CR), event-free survival (EFS) and overall survival (OS) were analyzed. CR was defined <5% blasts by morphology while MRD remission was defined as MRD <0.1%.

Results: Seventy-three children with R/R AML were analyzed. Male: Female ratio was 2.65:1, with median age of 10 years (IQR: 6 – 12 years). R/R AML were 52 (71.23%) and 21 (28.77%) respectively. Among 119 cycles of Clad-AraC administered sepsis mortality 7/73 9.59%. 46/73 (63.01%) achieved CR after the median of 1 cycle of Clad-AraC. MRD remission was achieved in 36/73 (49.3%) after a median of 1 cycle of chemotherapy; 11/73 children underwent HSCT. 5-year EFS was 22.3% ± 5.3% and OS of 15.05% ± 4%. Median duration to relapse after initial remission was 7 months (Range: 3-10 months).

Conclusion: Clad-AraC is an effective regimen for R/R AML with 49.3% MRD remission rate however with a high toxic death rate of 9.59%. Limited number of patients who underwent HSCT due to resource constraint is a prime reason for low EFS and OS in this cohort which when addressed can improve the outcomes.