Initiating acute myeloid leukemia consolidation treatment in the outpatient setting

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Introduction: Patients with acute myeloid leukemia (AML) who achieve complete remission with induction therapy require consolidation therapy. This treatment phase has historically been administered during hospitalization, however, cancer patients are at increased risk of deleterious outcomes if exposed to SARS-CoV-2 due to their immunocompromised state. Evaluating alternative options to inpatient consolidation therapy may decrease exposure risk and increase patient satisfaction during the pandemic.

Methods: This is a retrospective chart review of 17 patients admitted to Baptist Hospital of Miami or Miami Cancer Institute from June 2019 to February 2020 and from March 2020 to August 2020. Included patients had confirmed AML and received one of the following regimens: high-dose cytarabine (HiDAC) 1.5g/m2 - 3g/m2 every 12 hours on days 1,3,5 or days 1,2,3, venetoclax + decitabine or azacitidine, or liposomal daunorubicin + cytarabine. Pediatric patients were excluded. The primary outcomes are the safety of outpatient compared to inpatient consolidation therapy through incidence of adverse reactions, infection rates and hospital re-admission within 14 days of treatment. Secondary outcomes include pharmaceutical cost savings of outpatient versus inpatient consolidation treatment, readmissions at 30 days, and event-free survival stratified by cytogenetic risk category and transplant status.

Results: A total of 88 patients were screened and 17 were included. Most patients were male (n=9; 53%) with a median age of 59 years. Eight patients were treated as inpatient, seven as outpatient and two had their first cycle as inpatient and subsequent cycles as outpatient. All patients experienced adverse drug reactions (ADRs); 16 patients experienced grade 4 neutropenia, 14 had grade 4 thrombocytopenia, 12 had grade 3 anemia, and 4 had febrile neutropenia. Three patients treated as inpatient were re-admitted within 14 days of therapy, 2 patients from outpatient setting and 1 patient receiving therapy in mixed settings were hospitalized within 14 days of therapy. Documented infections occurred in 4 patients from inpatient setting, 2 from outpatient and 1 patient from mixed setting.

Conclusion: Most patients suffered ADRs that were managed appropriately with supportive measures. All patients receiving HiDAC therapy were hospitalized during treatment. Additional research is necessary to assess the safety of administering HiDAC in outpatient setting.