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POSTER ABSTRACTS

627.AGGRESSIVE LYMPHOMAS: CLINICAL AND EPIDEMIOLOGICAL

Safe and Effective Escalation of Evidence-Based Chemotherapy for Mature B Cell Non-Hodgkin's Lymphoma in a Low Resource Setting

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BACKGROUND
Although high intensity chemotherapy regimens result in >90% long term survival of children with Mature B-cell Non-Hodgkin Lymphoma (MB-NHL), low intensity chemotherapy regimens are used in most Sub-Sahara African (SSA) setting resulting in decades of less than 20% long term survival. This is in part because dose-intense chemotherapy strategies that are standard of care in high income countries (HIC) have not been widely or effectively implemented in low- and middle income countries (LMIC).
We investigated the toxicity and outcomes of children with MB-NHL who were treated with a treatment regimen that includes 1g/M2 of methotrexate per dose (mini COPADM) at Mulago National Referral Hospital in Uganda. The objective of this study was to evaluate the safety and effectiveness of an incremental chemotherapy escalation strategy to control treatment-related toxicities and increase response and survival of children treated for MB-NHL at a pediatric oncology center in the SSA setting.
METHODS
We prospectively collected clinical outcomes on children under 18 years with MB-NHL at Mulago National Referral Hospital (MNRH) in Uganda between January 2020 and July 2023. Overall (OS) and event-free survival (EFS) were calculated using the Kaplan-Meier method. Events in the EFS analysis were: 1) Death; 2) Relapse; or 3) Persistent or progressive disease at the end of Cycle 3. Patients were censored at the earlier of two years from presentation or their last day of follow-up. Descriptive statistics were presented. Toxicities were graded according to Common Terminology Criteria for Adverse Events (CTCAE) version 5.
RESULTS
We identified 77 patients, among whom 16 (21%) died prior to commencement of the first cycle of chemotherapy and 6 (8%) treated with alternative therapies. The 55 patients who were treated with mini COPADM with 1g/M ^{2} of methotrexate and are included in this analysis had similar demographics and clinical phenotypes to the 22 that were excluded.
The median age was 9.6 years (interquartile range ((IQR) 6.6 - 11.7 years) with 38 (69%) males. Patients were Stage III (53%, 29/55), stage IV (38%, 21/55); and 55%, (30/55) were high-risk. The most common presentations were abdominal mass 43 (78%) and jaw mass 14 (25%). With a median follow-up time of 9 months (IQR 6 - 24 months), the 1-year overall survival (OS) and event free survival (EFS) were 56%; 95% CI (41 - 76) and 41%; 95%CI (27 - 61) respectively. For children with high-risk disease, 1-year OS was 44%; 95%CI (28 - 72) and EFS 25%; 95% CI (12 - 51). Toxicities included febrile neutropenia (83%) and CTCAE grade ≥3 mucositis (44%). For the 12 patients whose cause of mortality was recorded, 1 case (8.3%) was treatment-related and 11 (91.7%) were due to cancer.
CONCLUSION:
This study establishes baseline response rates, survival, and toxicity for patients with pediatric MB-NHL in Uganda treated with 1g/M2 of methotrexate. Toxicities were consistent with treatment received, perhaps exacerbated by synergy of anthracycline

(50 mg/m2) along with intermediate dose MTX. These findings suggest that mini-COPADM with 1g/M ^{2} of methotrexate can be safely supported with the current clinical resources at MNRH and this low dose regimen accounts for the poor survival of children with MB-NHL in our center. We plan to escalate our therapy to mini-COAPDM with 3g/M2 and addition of Rituximab, with contingent intensification of supportive care to curb treatment-related toxicities.

Disclosures Allen: *Sobi, Inc:* Consultancy.

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