PO - (8580) - TREATMENT RESPONSE AMONG CAMEROONIAN ADOLESCENTS RECEIVING ANTIRETROVIRAL THERAPY IN URBAN AND RURAL SETTINGS: PRELIMINARY FINDINGS FROM THE READY-STUDY (EDCTP-CDF-1027)

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Background: Transitioning from pediatrics to adult-healthcare requires a successful antiretroviral treatment (ART) among adolescents living with HIV (ADLHIV). Implementing such policy implies monitoring ART response and selecting for therapeutic options for ADLHIV in resource-limited settings (RLS) like Cameroon.

Methods: The Ready-Study is conducted amongst ART-experienced ADLHIV (10-19 years old) in the Centre region, Cameroon. WHO-clinical staging, CD4-counts and viremia were determined; in case of virological failure [VF] (viremia≥1000 copies/ml), HIV drug resistance (HIVDR) and subtyping were performed, and p<0.05 considered significant.

Results: Out of 279 ADLHIV (212 urban versus 67 rural), the gender distribution was similar (54.5% female); median age was higher in urban (15 [IQR: 13-17] years) compared to rural (13 [IQR: 11-17] years), as well as the median duration on ART (7 [IQR: 3-10] years compared to 4 [IQR: 2-7] years, respectively); and the majority was on first-line ART (79.4% [162/204] urban versus 98.5% [66/67] rural, p<0.0004). Following treatment response, clinical failure (WHO-stage 3/4) was similarly low in both urban (5.7% [12/210]) and rural (4.5% [3/67]), p=0.938; CD4 increased similarly (p=0.298) from ART-initiation (370 cells/mm²[urban] versus 332 cells/mm²[rural]) to 6 years after initiation (938 cells/mm²[urban] versus 548 cells/mm²[rural]) and rate of immunodeficiency (<500 CD4 cells/mm²) was 41.0% (87/208) in urban versus 47.5% (29/61) in rural, p=0.428. VF was 43.2% (41/95) in urban versus 60.9% (14/23) in rural, p=0.126. Among nine (9) sequences available from those experiencing VF, overall HIVDR was found in 88.8%, with 77.7% NNRTI, 55.6% NRTI and 22.2% PI/r. All were HIV-1 group M, with 55.6% CRF02_AG, 22.0% F1 and 22.4% others.

Conclusion: ADLHIV appear clinically asymptomatic, with considerable immune recovery overtime. Despite differences in ART duration between urban and rural settings, VF was similarly high, associated with HIVDR mainly to NNRTI-based regimens. Thus, NNRTI-sparing regimens might be highly convenient when transitioning ADLHIV to adult ART-regimens in RLS like Cameroon.