Drugs for treatment and prevention, and other novel therapies

PO - (8595) - FACTORS ASSOCIATED WITH VIROLOGIC FAILURE AMONG WOMEN WITH PRIOR EXPOSURE TO ANTIRETROVIRAL DRUGS FOR PMTCT, KISUMU, KENYA

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Background: Use of antiretroviral (ARV) drugs for a discrete period for Preventing Mother to Child HIV transmission (PMTCT) only may be compared to Structured Treatment Interruption, which has been associated with virologic failure (VF). We sought to determine factors associated with VF among women on Antiretroviral Therapy (ART) but with prior exposure to short-term ARVs for PMTCT.

Methods: HIV-infected women presenting for ART initiation in three HIV care clinics in Kisumu County, Kenya were enrolled in the KIBS follow-up study (2010-2013) if they had previously received triple ARVs for PMTCT (Group 1) or short-course ARVs for PMTCT (Group 2) or were ARV naïve (Group 3). First-line ART was provided as per 2010 WHO treatment guidelines and viral load (VL) tests were conducted every six months for 24-months. VF was defined as any confirmed VL value ≥ 400 copies/ml after 6 months of ART initiation. Frequencies and proportions were used in the descriptive analysis while Pearson’s Chi-square/Fisher’s exact test was used to determine the association between VF and eight independent variables. Univariate and Multivariate Cox-proportional regression model was fitted to investigate factors associated with VF.

Results: 245 (Group1:27; Group2:107; Group3: 111) out of 284 participant data were analyzed. Majority were aged 25 – 29 years and over 60% had primary/lesser education. There were 39 (Group1:5; Group2:16; Group3:18) VFs with a total VF incidence of 8.12 [95% CI (5.96, 11.17)] per 1000 Person months of observation (PMOs). Group 2 had the lowest VF incidence. Baseline CD4 <349 cells/mm\(^3\) and initiation/use of TDF/3TC/EFV were associated with virologic failure (VF).

Conclusion: Women at risk of VF based on the identified risk factors should be identified and targeted with appropriate intervention. Further studies are needed to verify and understand the mechanisms of association between VF and TDF/3TC/EFV which is a WHO recommended first-line ART regimen.