Retrovirology

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Oral presentation

High emergence of drug resistance after HAART interruption at delivery in a cohort of HIV+ pregnant women submitted to antiretroviral treatment to prevent mother-to-child transmission in Rio de Janeiro, Brazil

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Background
Brazilian guidelines stipulate that HIV+ pregnant women initiating HAART for PMTCT, who do not otherwise need ARV for their own health, discontinue antiretrovirals after delivery. However, it is unknown how frequent drug resistance is with this strategy.

Objectives
to evaluate HIV-1 primary resistance at baseline visit, the impact of antiretroviral discontinuation, following delivery for the emergence of genotypic resistance, HIV-1 subtype, HIV-1 recent Infection using the Calypte BED Incidence EIA, and the rates of HIV-1 vertical transmission in this population of HIV-1 pregnant women.

Methods
Since January 2005, an HIV+ pregnant women cohort has been established at Hospital Geral de Nova Iguaçu. HAART for PMTCT was used according to the Brazilian Guidelines. Clinical/lab evaluations (CD4, HIV-RNA and genotyping were performed at baseline, 6–8 weeks after HAART, delivery and postpartum [15 days, 1 month and 6 months]).

Results
139 women/babies have been enrolled and followed. Median age is 25.3 years; 69.8% women are non-white, median gestational age at prenatal care initiation is 24 weeks. Median CD4 cell count at baseline is 518 cells/mm3 and HIV-1 VL 7.800 copies/mL. A NNRTI and PI based regimen was prescribed for 22.3% and 77.7% of the women, respectively. The median time on ART was 84 days; 76% had HIV-1 RNA <400 copies/ml at delivery. The prevalence of HIV primary drug resistant was 11.3% at baseline visit, and 13.8% of the women developed new mutations after ART interruption at delivery. HIV-1 recent infection was detected in 13.9% pregnant women at baseline visit. In the multivariate analysis, HIV-1 primary resistance was independently associated with the development of new resistance mutations at delivery/post-partum. Pregnant women with detectable HIV-1 RNA at delivery had a RR of detection of mutations at delivery/post-partum 3.5 times the one for women with undetectable HIV-1 RNA at delivery. The length of time of HAART use was independently associated with the incidence of resistance after ART initiation for PMTCT.

Conclusion

High Prevalence of HIV-1 primary resistance at baseline visit; 13.8% of the women developed new mutations after ART interruption after delivery. HIV-1 recent infection was detected in 13.9% pregnant women at baseline visit. HIV subtype B was the most prevalent. There was no HIV-1 vertical transmission.