

Oral presentation

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Low birth weight is associated with maternal nevirapine based antiretroviral therapy in Abidjan, Côte d'Ivoire: the Ditrane Plus project and MTCT-Plus initiative (2001-2007)

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Background

Pregnancy outcomes in women on antiretroviral treatment (ART) in low resource-settings are unknown. We investigate this issue within the Ditrane Plus project and MTCT-Plus Initiative in Abidjan.

Methods

All HIV-infected pregnant women with at least one delivery and eligible for ART were included. Between March 2001 and July 2003 when ART was not available, they received a short-course antiretroviral regimen (zidovudine (ZDV) + single-dose of nevirapine (sdNVP) or ZDV + lamivudine + sdNVP) (PMTCT Group) and between August 2003 and August 2007, they received a NVP-based ART therapy (ART Group). The following outcomes were studied: low-birth weight (LBW) (<2500 g), stillbirth and neonatal mortality. Women with multiple pregnancies were excluded. Factors associated with LBW were analysed using a logistic regression model.

Results

Overall, 326 HIV-1 infected women were included: 175 in the PMTCT Group with a median CD4 count 177 cells/mm³ and 151 initiated ART for at least 28 days before delivery with median CD4 count 182 cells/mm³. Still

birth rate was 3.3% in the ART vs 2.9% in the PMTCT group, ($p=0.84$). The rate of LBW was 22.3% in the ART and 12.4% in the PMTCT group ($p=0.02$). The multivariate regression model ($n=309$), ART was associated with LBW when adjusting on the CD4 count, WHO staging, maternal age and maternal body mass index ($ORa=2.53$, $p=0.015$). The survival at 12 month in HIV-uninfected children was similar between the two groups (Log-Rank test, $p=0.78$). Neither LBW ($ORa=1.5$, $p=0.38$) nor the exposition to ART ($ORa=1.1$, $p=0.85$) were associated with infant mortality.

Conclusions

ART initiated in pregnant women induced low birth weight compared to newborn exposed to PMTCT regimen despite a supplementation with multivitamin in all pregnant women. The proper effect of maternal HAART on child survival needs to be assessed.