

Poster presentation

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## Early diagnosis of HIV-1 infection in Cambodian infants

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### Objective

In Cambodia, national programs to prevent mother-to-child transmission (MTCT) of HIV, scaled up since 2001, were hampered by lack of access to HIV early diagnosis in infancy. A low cost strategy to assess HIV-RNA viral load, was implemented in 2005 and applied to the early diagnosis in infants. Our objectives were i) to generate information on the early diagnosis of HIV infection in Cambodia, and ii) to estimate the in utero and perinatal MTCT rates of HIV-1 among mothers delivering at Calmette Hospital, Phnom Penh.

### Methods

Detection of HIV-RNA in infants was determined using the ANRS second-generation (G2) real-time RT-PCR test.

### Results

i) Between May 2005 and February 2007, 755 plasma samples from children (mean age: 5.5 months [1-18]), born from HIV-infected mothers were screened for HIV infection. Samples originated from Phnom Penh (57.8%) and from 5 provinces (42.2%). Sex Ratio F/M was 0.97. Data showed that 134/755 (17.7%) samples were HIV-RNA positive (mean viral load: 6.4 Log<sub>10</sub> [3.9-8.6]). ii) During the study period, 157 HIV-infected pregnant women (mean age: 27, IQR [25-31]) attended antenatal care and delivered at Calmette Hospital. Among those, 77 (49%) on HAART delivered 77 babies of whom 2 were

HIV-RNA positive (MTCT: 2.6%). Twenty-eight (18.1%), not eligible for HAART, received AZT then sdNVP during labour: 3/28 (10.7%) babies were HIV-RNA positive. Forty-one (26%) received only sdNVP during labour because of HIV late testing: 6 infants (14.6%) were diagnosed HIV-RNA positive. Finally, 11 mothers did not receive any prophylaxis: 2 infants (18.1%) were HIV-RNA positive.

### Conclusions

This study confirms the usefulness of the HIV RNA ANRS (G2) real-time RT-PCR test to diagnose early HIV-1 infection in infancy and to monitor PMTCT programs. This study also highlights the urgent need to expand the early diagnosis at the national level to improve medical care of HIV infected Cambodian children and to expand HAART access for women during pregnancy to reduce MTCT.