

Oral presentation

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Risk factors for HCV infection in HIV positive pregnant women and rate of HCV perinatal transmission in Thailand

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Objectives

To assess the prevalence of HCV in HIV-1 infected and uninfected pregnant women; to determine factors associated with maternal HCV infection in HIV-infected pregnant women; and to evaluate the rate of HCV transmission in infants born to HIV-HCV co-infected mothers in Thailand.

Population

1435 HIV-1 infected pregnant women were enrolled from 1997 to 1999 in the Perinatal HIV Prevention Trial (PHPT-1), multicenter study performed in 27 hospitals throughout Thailand. The control group was composed of 448 HIV uninfected pregnant women randomly selected with a 1:3 ratio in the same hospital sites.

Methods

Maternal HCV serology was assessed at 26 weeks of gestational age or later, using an EIA (Murex anti-HCV kit v. 4.0) and confirmed with a recombinant immunoblot (Bioblot HCV). HCV RNA load was quantitated using the Cobas Amplicor HCV Monitor Test, v. 2.0 (Roche Molecular Diagnostics). Infants were considered HCV infected if positive for HCV serology at 18 months of age or positive for HCV RNA before the age of 6 months. We tested the

association of socio-demographic and medical characteristics with maternal HCV infection in HIV-infected mothers.

Results

Of the 1435 HIV infected pregnant women, 42 (2.9%, 95% CI 2.1–3.8%) were HCV infected versus 2 (0.5%, 95% CI 0–1.1%) of the 448 HIV uninfected pregnant women ($P = 0.001$). Among HIV infected women, 3 (33%) of those with a history of IV drug use were HCV infected, versus 38 (2.8%) among the 1338 others ($p = 0.002$). HCV co-infected and not co-infected women did not differ for their CD4 count or HIV viral load. Of the 42 HIV-HCV co-infected women, 30 (71%) had circulating HCV RNA (range 3.61–6.12 \log_{10} IU/mL). The rate of HCV perinatal transmission was 10% (4/40) but there was no HIV-HCV co-transmission. All HCV transmitting mothers had an HCV viral load greater than 5.5 \log_{10} IU/ml.

Conclusion

The prevalence of HCV infection was six times higher in HIV-1 infected women compared to HIV-1 uninfected women. IV drug use was the main risk factor for HCV infection. The low number of HCV infected children did

not allow for the investigation of the risk factors for HCV perinatal transmission.

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