#891

Intensive Etravirine PK and HIV-1 Viral Load in Breast Milk and Plasma in HIV+ Women Receiving HAART

LaShonda Spencer*, Siyu Liu, Chia-Hao Wang, Michael Neely, Stan Louis, Andrea Kovacs

*Keck School of Medicine of USC, Pediatric Infectious Diseases, Los Angeles, CA, USC School of Pharmacy, Los Angeles CA

Background

Worldwide, with the majority of transmissions occurring in the first 6 weeks of life. MTCT of HIV can occur at different time periods perinatally: in utero, at time of delivery or in the breastfeeding period. Breastfeeding is a major risk factor for MTCT of HIV.

Methods

► ETR concentrations in breast milk parallel the plasma concentrations (Fig 1).

► ETR concentrations in both plasma and breast milk increased as the time interval between drug ingestion and sample collection increased, with a peak at the 4 hour collection time point (Table 6).

► Two subjects had detectable HIV RNA in BM at D14 despite suppressed plasma viral load. There were no significant differences in the ETR concentrations or AUC 0-12 in these subjects in those with undetectable HIV RNA (Table 7).

► Measured ETV concentrations in breast milk and plasma exceeded the wild-type type 1 ETV at all time points and are predicted to remain above this threshold for 24 hours after a dose in the majority of women.

► Differences in in vitro models and individual pharmacodynamic parameters may allow for compartmental viral replication despite virologic suppression in plasma.

► HAART combinations that include ETR may prove useful for prevention of BM MTCT in resource limited countries where exclusive breastfeeding is recommended.

Conclusions

References


Grant Support

Grant support provided by the National Institutes of Health.