Peripartum Linkage to Care in Hepatitis C: Maternal Treatment and Infant Testing

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BACKGROUND

- Hepatitis C virus (HCV) infection in women of childbearing potential has increased dramatically over the last two decades with an 89% increase among pregnant women and a 68% increase in infants born to HCV-infected women in the USA
- Globally it is estimated that between 1.7-3.6% of pregnant women are infected with HCV
- Vertical transmission ranges between 6-11% with injection drug use, elevated maternal HCV RNA (>10^6 IU/ml), and HIV co-infection risk factors for transmission
- Maternal linkage to care and infant screening historically have been poor with baseline rates between 15-20%
- We studied an intervention that provided co-localized postpartum maternal treatment and infant testing

METHODS

- Eligible participants were recruited from health systems in Cincinnati, OH and Morgantown, WV, areas that have been significantly affected by injection opioid use
- Inclusion criteria: ≥18 y/o, chronic HCV, h/o IDU, no major fetal abnormalities, virally suppressed if HIV+, <36 weeks gestation. Exclusion criteria: current clinically significant drug use, HBV sAg+, medical condition that would compromise participation
- Phylogenetic sequencing was performed on maternal-infant pairs

In a population of pregnant women with a history of injection drug use and chronic HCV, co-localization of visits for maternal treatment and infant testing resulted in 28/54 (52%) of mothers successfully completing HCV treatment and 23/30 (77%) of infants being tested for HCV.

RESULTS

- Maternal
  - 54 pregnant women were enrolled; 49 completed at least one study visit
  - 28 received post-partum DAA therapy with sofosbuvir-velpatasvir; all 28 completed treatment and had undetectable HCV RNA at the end of treatment
  - 10 subjects completed SVR12 testing; all achieved SVR12
- Infant
  - Data was available for 30 infants, of which 23 were tested for HCV
  - 11 were completed the first visit, 7 completed the first two visits and 5 completed all three visits
  - HCV RNA was detected in 1 of 23 infants for a vertical transmission rate of ~4%
- Significant challenges were experienced due to the COVID19 pandemic and associated prolonged closures

CONCLUSIONS

- High rates of infants born to women with HCV makes effective linkage strategies imperative
- Co-localization of testing and treatment significantly increased both maternal linkage to care and successful treatment as well as testing and linkage to care for perinatally exposed infants
- An unanticipated obstacle was maternal loss of custody and involvement of the infant in the foster care system (7 of 30). This must be addressed in any intervention that involves this patient population
- Our findings and those from the ongoing STORC trial can be used to optimize linkage to care

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