O093
Oral Session
Hepatitis B treatment and management

HEPATITIS B VIRUS IN PREGNANCY: EVALUATION OF ANTIVIRAL TREATMENT EFFICACY AND RISK OF PERINATAL TRANSMISSION

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Objectives: Our country is moderately endemic for hepatitis B virus (HBV) prevalence (2-7%). Our aim was to evaluate the efficacy of antiviral therapy and immunoprophylaxis to prevent potential risk of mother-to-child / vertical HBV transmission, since it may occur despite immunoprophylaxis especially in infants of HBeAg-positive mothers with high HBV-DNA levels.

Methods: Retrospectively collected data of 108 HBsAg-positive pregnant women and their older children and infants up to one year registered at 10 referral hospitals were included. Demographic data, HBeAg status, serum HBV-DNA at first, second, third trimesters, highest ALT, AST levels of mothers, treatment history for chronic hepatitis B (CHB) during pregnancy, serum HBsAg and Anti-HBs of infants at one year, presence of HBsAg-positive sibling/s were recorded.

Results: Mean age of pregnant women were 30.6±5.5 (18-43) years, 26 (24.1%) were HBeAg-positive, mean ALT, AST and HBV-DNA levels at first, second, and third trimesters were 58.2±95.9(9-509) IU, 52.7±82.6(9-457) IU, $2.5x10^6$±$1.39x10^7$ IU/ml, $106.3x10^6$±$40.3x10^7$ IU/ml, $20.5x10^6$±$10.2x10^7$ IU/ml, respectively. Fifty-two (48.1%) had a family history of HBV infection, 12 (11.1%, only 3 HBeAg-positive) already had a total of 15 HBsAg-positive children [3 had received both HBV vaccine and hepatitis B immunoglobulin (HBIG), 7 only HBV vaccine, 5 none, after birth] priorly. Three of their older children had CHB. Four (33.3%) out of 12 infants with at least one HBsAg-positive sibling developed HBsAg positivity (3 inactive HBsAg carrier, 1 CHB) despite active and passive immunopropylaxis after birth. Only one of them had HBeAg-positive mother, and only two mothers had HBV-DNA levels >200.000IU/ml at third trimester. All four HBsAg-positive children were breast-fed. Twenty-one (19.4%) pregnant women received antiviral treatment with pregnancy category B drugs mostly at a mean gestational age of 23.3±5.6(12-32) weeks to treat CHB and/or to decrease HBV-DNA levels to prevent vertical transmission [16(76.2%) tenofovir, 3(14.3%) telbivudine, 2(9.5%) lamivudine]. None of their infants were HBsAg-positive or had any birth defects, and all had protective levels of anti-HBs. Totally, five (4.6%) infants were HBsAg-positive despite active and passive immunization, four (80%) had at least one HBsAg-positive sibling and were breast-fed. Only two (40%) had HBeAg-positive mothers with HBV-DNA levels >200.000IU/ml.

Conclusions: In moderately or highly HBV endemic countries, such as our country, pregnant women should be screened for HBsAg. If positivity is detected, their infants should receive both HBV vaccine and HBIG after delivery to prevent vertical transmission. HBeAg-positive pregnant women with high HBV-DNA levels should receive antiviral therapy at 3rd trimester of pregnancy to prevent HBV

transmission. Tenofovir, telbivudin and lamivudine treatment during second and third trimester seemed to be efficient and safe. Presence of a HBsAg-positive sibling and breast-feeding may play a role in perinatal HBV transmission, despite active and passive immunization, regardless of HBeAg status and HBV-DNA level of the mother.