Research Letter

Seroconversion Rate After Postnatal Immunoprophylaxis for Exposed Infants in Prevention of Hepatitis B Vertical Transmission

Objective
The current study was carried out to assess the efficacy of immunoprophylaxis with Hepatitis B immunoglobulin given at birth and three doses of HBV vaccine at 0, 6 weeks and 6 months in prevention of transmission of HBV from HBsAg-positive mothers to their infants [1].

Material and Methods
The study was conducted in a teaching hospital in Chennai, India. All the infants born to HBsAg-positive mothers received immunoprophylaxis and were followed up and serology for anti HBsAg Ab titres was done 6 months or more after the third dose of vaccine. Those with antibody titres below the protective level were tested for HBsAg. Those negative for HBsAg were reimmunized with 3 doses of HBV vaccine at 0, 1 and 6 months and antibody level was checked after 2 months from the third dose.

Results
Out of a total of 9568 deliveries during the period of 4 years, 81 (0.8%) mothers were HBsAg positive. Out of these, only 30 babies completed the follow up in our hospital. Of these 30, 24 children (80%) had protective levels of anti HBs antibodies. Testing for HBsAg was advised for those six children who had nil antibodies. One child was HBsAg positive, four children were negative, one did not consent to getting it done. The four HBsAg negative babies were revaccinated at 0, 1 and 6 months. Anti HBsAb levels were checked 2 months after completing the schedule and were found to be protective (>10 IU l⁻¹).

Discussion
There is very little data on the failure rate of immunoprophylaxis in infants of HBsAg-positive mothers in India. In our study, only 80% of the 30 babies who got their serology done had protective levels of anti HBsAg antibodies and 1 out of the 30 (3.3%) was HBsAg+ve. Only full-term infants with birth weight above 2.5 kg were analysed. The HBeAg status was not checked for any mother. In a study by SL Ngui et al. [2] 16/232 infants 6.9% were HBsAg positive at 1 year of age. In a study by Chernesky et al. [3] from Canada, out of 32 children born to HBsAg+ve mothers who had received passive to active immunoprophylaxis, 84.4% had protective level of antibodies to HBsAg.

To conclude a small proportion of children born to HBsAg-positive mothers remain unprotected even after active to passive immunoprophylaxis. Our study highlights the need for all children born to HBsAg-positive mothers to be followed up and we also recommend that those who have not seroconverted should be revaccinated.

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References

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