

Abstract

Objectives : To assess the risk of perinatal transmission of hepatitis B in Western province of Sri Lanka, by assessing the prevalence of hepatitis B surface antigen (HBsAg) carrier state among antenatal mothers.

To assess the prevalence of exposure to hepatitis B virus and factors associated with such exposure among this population.

Design : A community based prevalence study.

Setting : Western province of Sri Lanka including Colombo, Gampaha and Kalutara districts.

Duration : July to September 2002

Study group : 1855 antenatal mothers attending clinics conducted by medical officers of health (MOH)

Methods : A multi-stage cluster sampling was done with the field antenatal clinic as the final cluster. Venous blood samples and data were collected from selected antenatal mothers after obtaining informed consent.

Following tests were performed on all samples.

- Reverse passive haemagglutination assay (RPHA) for HBsAg
- Enzyme immuno assay (EIA) for hepatitis B core antibody (anti-HBc)

Two more tests were performed on anti-HBc positive samples.

- EIA for HBsAg
- Passive haemagglutination assay for hepatitis B surface antibody (anti-HBs)

Results : The prevalence of HBsAg carrier state was zero among this population after testing with RPHA and EIA both.

Anti-HBc prevalence was 2.21% (41/1855).

PHA detected anti-HBs only among 24.39% (10/41) of anti-HBc positive mothers.

Higher prevalence of anti-HBc was observed among mothers who gave a past history of jaundice and among primiparous mothers.

Anti-HBc prevalence was lower among antenatal mothers whose husbands had a history of foreign travel.

There were no significant associations between anti-HBc prevalence and any of the other factors elicited in the history.

Conclusions : There is a low level of exposure to HBV among antenatal mothers in Western province of Sri Lanka.

None of those exposed mothers carry evidence of chronic infection.

Therefore perinatal infection is not an important route of HBV transmission in this province of the country.