

Poster presentation

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Hepatitis B vaccine efficacy in HCV vertical infected infants

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Aim

The aim of the study was to evaluate the immunogenicity of hepatitis B vaccine after primary immunization in children vertically infected with HCV.

Patients and methods

105 infants born to HCV infected mothers were vaccinated against hepatitis B virus (recombinant vaccine, 10 µg, 0-1-6 month schedule). The diagnosis of HCV infection in infants was based on positive viral RNA in serum by PCR (Amplicor v 2,0 Roche) on at least two separate specimens in the first year of life. HCV infection was confirmed in 18 children. 87 children who were HCV uninfected formed the control group. Anti-HBs titers were measured 3-6 months after the third dose of immunization in HCV infected children and in control group. Seroconversion was considered if anti-HBs level was ≥ 10 mIU/mL. Non-responders were tested for HBV infection by PCR.

Results

13/18 (73%) HCV infected children achieved seroconversion (anti-HBs ≥ 10 mIU/l) compared to 80/87 (92%) in the control group. 5 (27%) HCV infected children and 7 (8%) healthy subjects were non-responders ($p=0,04$). Antibody titers ≥ 100 IU/l following vaccination were observed in 10/18 (55%) HCV infected and in 56/87 (64%) uninfected children. The mean level of anti-HBs in hepatitis C infected children was lower than that found in control group (180 mIU/ml and 306 mIU/ml respectively). None of non-responders were infected with HBV.

Conclusions

The immunogenicity of HBV vaccine seems to be lower in infants infected with HCV. Further studies are necessary to establish the role of cellular response and immune memory in protection of HCV-infected individuals without anti-HBs antibodies after vaccination.