Evaluation of serum hepatitis B antibody level in vaccinated children after 14 years in Kashan, Iran

Taghavi Ardakani A (MD)\textsuperscript{1}, Soltani B (MD)\textsuperscript{*1}
Sharif MR (MD)\textsuperscript{1}, Moosavi GhA (MSc)\textsuperscript{2}, Khademian M (MD)\textsuperscript{3}

\textsuperscript{1} Assistant Professor, Department of Pediatric, Kashan University of Medical Sciences, Kashan, Iran.
\textsuperscript{2} Academic Instructor, Department of Statistical, Kashan University of Medical Sciences, Kashan, Iran.
\textsuperscript{3} Resident in Pediatric, Kashan University of Medical Sciences, Kashan, Iran.

Abstract

Background and Objective: Hepatitis B vaccination has been conducted in neonates in the routine vaccination in Iran since 1993. This study was carried out to evaluate the serum hepatitis B antibody level in vaccinated children after 14 years in Kashan, Iran.

Materials and Methods: This prospective cohort study was conducted on 200 fourteen-year-old children which were selected via a simple random sampling method in Kashan, Iran during 2008-09. This subjects were have been vaccinated according to the governmental guideline at 0, 2 and 6 months old. Two ml blood specimens were obtained from children and serum hepatitis B surface antibody (anti-HBs) and hepatitis B core antibody (anti-HBc) were determined by ELISA method. Immunity was interpreted as anti-HBs\textsuperscript{\geq}10 IU/L. Data were analyzed using SPSS-13, Chi-Square and Fisher’s exact tests.

Results: 92\% girls and 95\% boys, totally 187(93.5\%) children had serum anti-HBs\textsuperscript{\geq}10 IU/L. Anti-HBc was positive in 3 (3\%) girls and 5(5\%) boys, totally 8(4\%) which all of them had serum anti-HBS\textsuperscript{\leq}10 IU/L. No case of positive HBs Ag was detected. Immunity was detected in 11 of 18 (61.1\%) children with birth weight<2.5 kg and in 176 of 182 (96.7\%) children with birth weight\textsuperscript{\geq}2.5 kg (P<0.05).

Conclusion: The immunity following the complete series (0, 2, 6 months old) of hepatitis B vaccination remained detectable after 14 years.

Keywords: Hepatitis B, Hepatitis B vaccine, Anti-HBs

* Corresponding Author: Soltani B (MD), E-mail: babak_soltani1969@yahoo.com

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