

## Original Paper

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

Taghavi Ardakani A (MD)<sup>1</sup>, Soltani B (MD)\*<sup>1</sup>  
Sharif MR (MD)<sup>1</sup>, Moosavi GhA (MSc)<sup>2</sup>, Khademian M (MD)<sup>3</sup>

<sup>1</sup>Assistant Professor, Department of Pediatric, Kashan University of Medical Sciences, Kashan, Iran.

<sup>2</sup>Academic Instructor, Department of Statistical, Kashan University of Medical Sciences, Kashan, Iran.

<sup>3</sup>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. These 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 $\geq$ 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 $\geq$ 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 $\leq$ 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 $\geq$ 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

Received 6 Aug 2011

Revised 10 Sep 2011

Accepted 20 Sep 2011