

P-024

Long-term impact on health vocational high school students 20 years after national HBV vaccination

Selma Tosun¹, Seher Ayten Coskuner¹, Hulya Bayık²

¹Health Science University Izmir Bozyaka Education and Resarch Hospital Department of Infectious Diseases and Clinical Microbiology Izmir

²Health Science University Izmir Bozyaka Education and Resarch Hospital Department of Pediatrics Izmir

INTRODUCTION: Universal hepatitis B virus vaccine application to all newborns started at the year of 1998 in our country (Turkey). In addition, children who were born before 2000 during the catch up vaccination campaign were re-vaccinated. In this study we aimed to evaluate HBV protection status of health vocational high school students on their internship at hospitals who received primary immunization at birth.

METHODS: Students ages between 17-24 who were in their internship at hospital clinics at year 2015-2018 were included in the study. After informed consents and ethical commity approvals were taken, all students filled a questionnaire about sociodemographic features, knowledge and awareness about HBV infection. Serum anti-HBs and anti-HBc IgG levels was measured by an enzyme linked assay. If only anti-HBc IgG positive, also HBsAg was measured by the same way.

FINDINGS: Laboratory results of 504 students are shown at the table. When anti-HBs status were analysed, in 90% of students levels were at protection levels (≥ 10 IU/ml) and in 10% of those the anti-HBs levels were ≤ 9 IU/ml. Only in two of female and one male students HBsAg was found to be reactive. Mothers of these students were also HBsAg carriers and were on oral anti-viral therapy.

CONCLUSION: When antiHBs levels were examined, 90% of the students were found to have protective levels of antibodies. Among 504 students only three (0.6%) students whose mothers were HBsAg positive were found to be HBsAg positive. Although universal HBV vaccine administration was found to be highly effective from protection of HBV infection, the levels of anti-HBs decreased to non-protective levels in 48 (9.5%) of students. It was observed that seronegativity was higher in students born in 2001. It was thought that this was a catch up vaccination campaign for children born before 2000. However, anamnestic response was obtained in all students when a single dose of booster HBV vaccine was administered to 48 students whose antibody levels were below the protective level. This result showed that the primary vaccination from birth was very effective and that seroprotection was maintained for at least 20 years. In our study group, it was learned that the mother of three students had chronic HBV patients and this result once again shows the importance of HBsAg in pregnancy. In conclusion, universal HBV vaccination in Turkey is very effective for protection from HBV infection during adolescents and young adult period, and HBsAg examination in pregnancy should not be neglected.

Keywords: HBV, universal vaccination, long-term antiHBs

Birth years	≤ 9 IU/MI *	≥ 10 IU/MI	Total
1994	2 (6%)	32(94%)	33
1995	3 (5%)	50(95%)	53
1996	0	33(100%)	33
1997	1(2%)	49(98%)	50
1998	0	80 (100%)	80
1999	21 (1%1)	168(89%)	189
2000	1(1%1)	8 (89%)	89
2001	23(41%)	33 (59%)	59
Total	51 (10%)	453 (90%)	504

*Two girl and one boy students are HBsAg positive