OMICS Group Conferences
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3rd International Conference on
Vaccines & Vaccination
July 29-31, 2013 Embassy Suites Las Vegas, NV, USA

The impact of the universal infant hepatitis B vaccination program in the Turkish population in Cyprus

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This study was conducted to assess the impact of the universal infant hepatitis B vaccination program, which started in 1998 in the Turkish population in Northern Cyprus.

A total of 600 persons, 1 to 30 years old were selected for the study with cluster sampling. The information on sociodemographic characteristics was gathered for each participant and in 585 of them, hepatitis B surface antigen (HBsAg), anti-hepatitis B surface antigen antibody (anti-HBs) and anticore antibody (anti-HBc) were tested.

The overall prevalence of anti-HBc and HBsAg carriage was 13.2% and 0.85%, respectively. Old age and low parental educational level were the major independent risk factors for HBV transmission. Seroprevalence of both anti-HBc and anti-HBs antibodies was similar in children 1-7 years of age. After 8 years of age, anti-HBc seroprevalence increased significantly with age, while anti-HBs prevalence decreased ($p<0.001$). Anti-HBc prevalence increased from 7.0% in children aged 1-7 years to 17.9% in persons aged 16-20 years. None of the children under 12 years of age were HBsAg-positive, while 1.9% of persons aged 16-20 years were HBsAg carriers. Anti-HBs seroprevalence exceeding 90% was found in the cohorts targeted by the routine hepatitis B vaccination program, whereas 36.4% of young adults aged 21-30 years were anti-HBs-positive.

The study shows that universal infant hepatitis B immunization has a substantial impact on the immunity in children. However, prevalence of HBV infection is still high in adolescent and young adults in Northern Cyprus. Therefore, catch-up immunization for these groups will help to reduce hepatitis B transmission.

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