Seroprevalence of IgG Antibodies to Pertussis Toxin in the First Grade Medical Students in Hamedan, Iran

G. Mohammadi et al.

Hamedan University of Medical Sciences, Hamedan, Iran (Islamic Republic of)

Background: Pertussis is a highly communicable disease of the respiratory tract caused by Bordetella pertussis. Neither natural disease nor vaccination provide complete or lifelong immunity against reinfection or disease. Protection against typical disease is measurable after 12 years. Coughing adolescents and adults currently are the major reservoir for B. pertussis and are the usual source for “index cases” in infants and children. Without natural reinfection or repeated booster vaccination, adolescent and adults are susceptible to clinical disease if exposed. The aim of this study was to assess the B. pertussis antibody levels in the medical students of Hamedan University of Medical Sciences.

Methods: One hundred sixty-three first grade medical students with no history of chronic respiratory infection and immunodeficiency were selected. Serum samples were collected from them and analyzed for anti-pertussis toxin (PT) IgG antibodies by enzyme-linked immunosorbent assay (ELISA). Antibody titers were calculated using reference line methodology. Anti-PT titers more than 24 μg/ml were considered to be positive.

Results: The mean age of cases was 19.48 year. Out of 163 cases, 47.6 percent had positive antibody titer and the mean of antibody titer was 71.72 μg/ml. 42% of females and 54% of males had positive antibody titers. Thirty-three percent of age group <19yr, 51% of age group 19-21 yr, and 45% of age group >21yr had positive antibody level. The mean of antibody level in male was 84.07, in female was 58.9 μg/ml. Antibody levels were not statistically significantly different between males and females. The mean antibody level in age group <19 yr was 37.01, in age group 19—21 yr was 82.725 μg/ml, and in age group >21 yr was 49.269 μg/ml. There were no statistically significant differences between age groups in the proportion of antibody levels.

Conclusion: The high rates of seropositivity in our study population indicate previous infection, which are a threat to infants who have not completed primary immunisation. In this respect, booster vaccination for adolescents and adults is recommended.

doi:10.1016/j.ijid.2008.05.249

Emergence of New Genotypes of Measles Virus in the Philippines After a Mass Vaccination

N. Fuji et al.

Department of Virology, Graduate School of Medicine, Tohoku University, Sendai, Japan

Background: Measles virus infection is a public health problem in the world, remains a main cause of mortality among young children. Molecular epidemiology can provide the useful information regarding the source of measles infection. Measles in the Philippines became under control after the mass vaccination campaign “Ligtas Tigdas” in 2004 and few cases were reported in 2005 and 2006. However, the number of reported cases increased in 2007. The purpose of this study is to show the molecular characteristic of circulating measles strains before and after mass-vaccination in the Philippines.

We randomly selected measles IgM positive serum samples from 2000 to 2007. The samples were collected from suspected measles cases and tested at Research Institute for Tropical Medicine (RITM), which is designated as the reference laboratory of measles surveillance in the Philippines. Those serum specimens were tested by RT-PCR for the detection of measles virus genome. PCR positive samples were sequenced and performed phylogenic analysis by using neighbor-joining method.

The phylogenetic analysis indicated that only genotype D3 was found between 2000 and 2004. In 2007, it was replaced by other genotypes, G3 and D9 among samples collected.

This study suggested that the indigenous measles strain (D3 genotype) in the Philippines was interrupted circulating by the mass-vaccination. But other genotypes might have been introduced into the Philippines from other countries. This indicated that current status of measles in the Philippines is in transition from endemic to epidemic measles and also importance of maintenance of high vaccine coverage even after the successful mass-vaccination campaign. Further analysis of virological characterization is essential to assess the progress of the elimination of measles.

doi:10.1016/j.ijid.2008.05.250

Detection of Human Metapneumovirus and Human Bocavirus from Patients with Influenza-Like Illness in the Philippines

A. Suzuki et al.

Department of Virology, Tohoku University Graduate School of Medicine, Sendai, Japan

Background: Recently, novel viruses, such as human metapneumovirus (hMPV), human coronaviruses (HCoVs), and human bocavirus (HBoV), were identified, and are