

Age related seroprevalence of chickenpox in Colombo district

Chickenpox is prevalent throughout the world. In temperate countries 90% of the population is infected with chickenpox in their childhood, thus preventing varicella zoster virus (VZV) infection in adult life. Reports from developing countries and tropical countries show that a large number of persons get infected during their adult life. In Sri Lanka, no research has been carried out yet to investigate the epidemiology of this disease.

This descriptive study was conducted during 1998-1999 in Colombo district. Multi stage cluster sampling technique was used to select 913 subjects who participated with informed consent in this study. From each participant 1-10ml of blood was collected by venepuncture. The sera were tested for IgG antibodies to VZV by ELISA (Human. TM). Statistical analysis was done using Microsoft Excel & Minitab statistical software.

Out of 913 individuals 331 were seropositive for VZV IgG (36%). Urban and rural seropositives were (184/387) 47.5% & (147/526) 27.9% respectively. In the age group 0-9 years, urban seroprevalence was 47.7% and rural 15% the age group 10-19 years, urban seropositivity was 55.2% and rural 39.0% in the 20-29 years age group urban seroprevalence was 46.8% & rural 20.0% in the age group 30-39 years urban seroprevalence was 65% & rural 49% Age group 40-49 years, urban seroprevalence was 68% and rural 52.9% . In the age group over 60 years urban seroprevalence was 57.8% rural 60.0%

The seropositivity rate for VZV among young adults in Colombo district is very low when compared to temperate countries. A significantly greater number of individuals in rural community are susceptible to chickenpox than urban population ($P < 0.0001$). These findings should be confirmed by a large scale island-wide study and would provide a basis for formulation of vaccination policy for chickenpox in Sri Lanka