SUMMARY

Varicella zoster virus causes chickenpox through primary infection and herpes zoster by reactivation of latent virus in the dorsal root ganglia. Chickenpox is a benign disease in childhood but when occurs in adults, it is severe and may be fatal with high risk of complications e.g. encephalitis and pneumonia.

In temperate countries, the majority of adults are immune due to previous exposure in childhood, but in tropical countries more than 50% of adult are susceptible with the risk of serious morbidity and mortality.

This study was carried out on 90 adolescents, from both sexes, 11-15 years old, selected from cases of the outpatient clinics of El-Mahalla El-Kobra General Hospital, in the period of time from September 2004 till February 2005. Specially prepared sheet was fulfilled and clincal examination of adolescents was done to exclude acute or chronic diseases, and their sera were examined for the quantitative estimation of varicella zoster virus IgG by ELISA technique.

The study was carried out to determine the susceptibility of this age group to VZV infection in order to evaluate a strategy for varicella vaccination in our country, estimate the reliability of VZV infection history, and to determine whether the prevaccination antibody tests are cost effective or not.

All participants were not vaccinated by Varicella vaccine and residing permanently in the area (El-Mahalla El-Kobra and surrounding near villages).

Participant's sera were examined for serum anti-VZV IgG titre using a specific varicella zoster IgG ELISA kit.

We found that:

Seropositivity was significantly high among participant adolescents (93.3%).

Seropositivity was significantly higher among rural than urban adolescents, with higher number of siblings than lower number, with non working mothers than working mothers, with lower socioeconomic classes than higher classes and with less educated parents than highly educated ones.

Seropositivity was not influenced by sex or age of adolescents

Past history of chickenpox infection was associated with 100% seropositivity to VZV.

Seropositivity was not affected significatly by past history of exposure to VZV infection in the family or in classmates.

Positive seroconversion was found in cases without past history of chickenpox infection, so we may document the occurence of subclinical infection.

We concluded that most adolescents are seropositive to VZV and need not to be vaccinated. Only susceptible adolescents are at higher risk of complicated severe varicella disease in adulthood and must be vaccinated. Serologic test can be done to adolescents with negative or unknown history of chickenpox and seronegative adolescents must be vaccinated. This may be preperly done at the entry to preparatory school.