

OP06.2

Family physicians taking care health care workers - is self-reported history of chickenpox a reliable marker for varicella zoster virus (VZV) immunity?

Eva Tai-Kwan Au(1), SKP Lau(2), DSM Lo(3)

(1) University Health Service, The Hong Kong Polytechnic University, HKSAR

(2) Department of Microbiology, LKS Faculty of Medicine, The University of Hong Kong

(3) University Health Service, The Hong Kong Polytechnic University, HKSAR

Corresponding author: Dr Eva Tai-Kwan Au, University Health Service, The Hong Kong Polytechnic University, UHS, PolyU, Hung Hom, Kowloon, Hong Kong. E-mail: eva.au@polyu.edu.hk

Background & Aim: Chickenpox is a highly transmissible disease. Nosocomial transmission of VZV is well recognized. Professional bodies have published different guidelines about immunization of health care personnel. US Center for Disease Control and Prevention recommended VZV IgG tests in all persons who cannot provide a written documentation of having 2 doses of varicella vaccine or verification of a history of VZV disease by a health-care provider; while professional bodies in the UK and Australia accepted a self-reported history of chickenpox as evidence of immunity.

This study aims to determine the association of a patient's history of chickenpox to VZV seropositivity.

Method: University students of health care related subjects were asked to report history of chickenpox. Their vaccination records were collected for review. Each of them had VZV IgG test by ELISA. The correlation of self-reported history and VZV seropositivity was calculated

Results: 808 students are recruited. 50 students had written documentation of having one or more doses of chickenpox vaccine, while 31 of them were uncertain of their vaccination history. Among the 727 included subjects, 75.65% reported history of chickenpox, of which 91.09% had positive VZV IgG. The positive predictive value of a self-reported history of chickenpox to VZV seropositivity was 91.09%. The negative predictive value of a self-reported negative history of chickenpox to VZV seronegativity was 46.36%. The sensitivity of a self-reported chickenpox history to predict positive VZV IgG titer was 85.93% and specificity 76.92%.

Conclusions: The positive predicted value of a self-reported history of chickenpox to VZV seropositivity is reasonably high. However, if we only use that as evidence of immunity, we will miss 9% of health care workers who are susceptible to infection, with the potential of spreading the virus to patients. Further investigations are needed to determine where it is cost effective to screen all health care workers by VZV IgG, or based on the disease history alone.