Risk Factors and Time-Trends of Cytomegalovirus (CMV), Syphilis, Toxoplasmosis and Viral Hepatitis Infection and Seroprevalence in Human Immunodeficiency Virus (HIV) Infected Patients

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Abstract

Introduction: Chronic bacterial, viral and parasitic infections contribute to the morbidity and mortality associated with human immunodeficiency virus (HIV) infection. This study investigated risk factors and time-trends of the seroprevalence of cytomegalovirus (CMV), toxoplasmosis and hepatitis A total antibody; and co-infection with syphilis, hepatitis B and hepatitis C among newly diagnosed HIV individuals in Singapore. Materials and Methods: This was a cross-sectional study. A random sample of 50% of HIV infected patients who visited the Communicable Disease Centre (CDC), Singapore for first-time care from January 2006 to December 2011 were analysed. Results: Among the 793 study subjects, 93.4% were male; 77.9% of them were of Chinese ethnicity; mean age at HIV diagnosis was 41.4 years; and the mean baseline CD4+ T-cell count was 222 cells/mm³. The prevalence of sero-reactivity for CMV was 96.8%; hepatitis A: 40.9%; and toxoplasmosis: 23.7%. Co-infection with syphilis was identified in 12.3%; hepatitis B: 8.1%; and hepatitis C: 2%. Among those co-infected with hepatitis C, 73.3% of them were intravenous drug user (IVDU). Syphilis co-infection was significantly more common among men who have sex with men (MSM) (multivariate OR: 2.53, 95% CI, 1.31 to 4.90, P = 0.006). Conclusion: This study described the baseline rates of HIV co-infection with syphilis, hepatitis B and C in Singapore, and sero-reactivity to CMV, toxoplasmosis and hepatitis A. The increased rates compared to the general population may have important consequences for disease progression, response to antiretroviral treatment and long-term general health.


Key words: HIV co-infections, Serology, Sexually Transmitted Infections

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