

Association of Human Immunodeficiency Virus with Incident Autoimmune Hemolytic Anemia: A Population-Based Cohort Study in Taiwan

Authors : Yung-Feng Yen, I-an Jen, Yi-Ming Arthur Chen

Abstract : The molecular mimicry between human immunodeficiency virus (HIV) protein and red blood cell (RBC) antigens could induce the production of anti-RBC autoantibodies. However, the association between HIV infection and subsequent development of autoimmune hemolytic anemia (AIHA) remains unclear. This nationwide population-based cohort study aimed to determine the association between incident AIHA and HIV in Taiwan. From 2000–2012, we identified adult people living with HIV/AIDS (PLWHA) from the Taiwan centers for disease control HIV Surveillance System. HIV-infected individuals were defined by positive HIV-1 western blot. Age- and sex-matched controls without HIV infection were selected from the Taiwan National Health Insurance Research Database for comparison. All patients were followed until Dec. 31, 2012, and observed for occurrence of AIHA. Of 171,468 subjects (19,052 PLWHA, 152,416 controls), 30 (0.02%) had incident AIHA during a mean follow-up of 5.45 years, including 23 (0.12%) PLWHA and 7 (0.01%) controls. After adjusting for potential confounders, HIV infection was found to be an independent risk factor of incident AIHA (adjusted hazard ratio [AHR], 20.9; 95% confidence interval [CI], 8.34-52.3). Moreover, PLWHA receiving HAART were more likely to develop AIHA than those not receiving HAART (AHR, 10.8; 95% CI, 2.90-40.1). Additionally, the risk of AIHA was significantly increased in those taking efavirenz (AHR, 3.15; 95% CI, 1.18-8.43) or atazanavir (AHR, 6.58; 95% CI, 1.88-22.9) component of the HAART. In conclusion, HIV infection is an independent risk factor for incident AIHA. Clinicians need to be aware of the higher risk of AIHA in PLWHA.

Keywords : autoimmune disease , hemolytic anemia, HIV, highly active antiretroviral treatment

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