Association between Hepatitis C Virus and Non-hodgkin’s Lymphoma at Siriraj Hospital

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Background: Hepatitis C virus (HCV) is reportedly associated with certain B-cell non-Hodgkin lymphomas (NHL) in many countries, but a study from Thailand found that there has been no such association in Thai patients. However, there are some limitations in previous studies about the definition of HCV infection and lack of comparison with normal population.

Objective: To study the association of HCV and NHL in Thai patients.

Methods: A case-control study was conducted. Patients diagnosed NHL, aged 18-80 years, with result of HCV screening were retrospectively reviewed during 2006-2016. Patients with positive anti-HCV antibody without further testing for HCV-RNA were excluded. HCV infection was defined by detectable HCV RNA in serum. Patients with HIV, autoimmune diseases, organ transplant and previous use of immunosuppressive drugs were excluded. Control group of normal Thai population was derived from previous 2014 national survey.

Results: The prevalence of anti-HCV positivity among 760 cases of NHL patients was 2.2% (95%CI, 1.15715–3.24285). Among NHL patients with anti-HCV positivity, HCV-RNA was found in 70.6% (95%CI, 48.9–92.2). In control group, the prevalence of anti-HCV positivity was 0.94% (95% CI 0.6951–1.1849) and the prevalence of HCV-RNA positivity among persons with anti-HCV positivity was 41.1% (95%CI 28.1–53.9). The prevalence of anti-HCV positivity and current HCV infection in NHL patients were significantly higher than those in normal Thai population (p=0.0016 and p<0.00001, respectively).

Conclusion: HCV infection is associated with NHL in Thai population.

Keywords: non-Hodgkin lymphomas, Hepatitis C virus, HVC RNA