The Risk of Severe Hepatic Outcome in Schizophrenia Patients with Comorbid Viral Hepatitis: A Nationwide Population-Based Cohort Study

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Objective: Schizophrenia patients with co-morbid viral hepatitis, including hepatitis B virus (HBV) or hepatitis C virus (HCV), is a growing concern. However, the long-term outcome of schizophrenia patient with comorbid viral hepatitis remains unclear.

Methods: Using a nationwide database, the Taiwan National Health Insurance Research Database, subjects who had first been diagnosed with schizophrenia between 2002 and 2013 were identified. The schizophrenia patients with viral hepatitis including HBV or HCV were designated as the viral hepatitis group. A 1:2 ratio was used to select age-, gender-, and index-year -matched control without viral hepatitis. Patients who had severe hepatic outcome before enrollment were excluded. The 2 cohorts were observed until December 31, 2013. The primary endpoint was occurrence of severe hepatic outcome including liver failure, liver decompensation, liver transplantation, and liver cancer.

Results: Among 16,365 newly diagnosed schizophrenia patients, we identified 614 patients with viral hepatitis, and 1,228 matched patients without viral hepatitis between January 2002 and December 2013. Of the 1,842 patients, 41 (2.22%) suffered from severe hepatic outcome during a mean follow-up period of 3.71±2.49 years, including 26 (4.23%) from the viral hepatitis cohort and 15 (1.22%) from the control group. In schizophrenia patients, the Cox proportional hazards analysis showed that the risk increased with viral hepatitis 3.58 (95% confidence interval (CI), 1.862 to 6.868; $p < 0.001$). Moreover, schizophrenia patients with HCV had higher risk than those without viral hepatitis (hazard ratio 5.07, 95% confidence interval (CI), 1.612 to 15.956; p = 0.0001). Furthermore, in viral hepatitis group, patients exposed to paliperidone treatment had reduced risk (hazard ratio 0.21, 95% confidence interval (CI), 0.073 to 0.592; p = 0.089), while those exposed to chlorpromazine use had increased risk (hazard ratio 1.246, 95% confidence

interval (CI), 0.499 to 3.115; p = 0.616). Liver decompensation is the most common among schizophrenia patients who developed severe hepatic outcome (76.92%).

Conclusions: Schizophrenia patients with comorbid viral hepatitis, especially HCV, have higher risk of severe hepatic outcome. Patients receiving paliperidone treatment had reduced risk although not significant. Further evaluation of hepatic function and antipsychotics use in schizophrenia patients with viral hepatitis is needed.