

中文題目：台灣一大型研究發現酒精、檳榔和香煙的使用與 C 型肝炎病毒感染有關並具有協同效應

英文題目：Synergetic association between alcohol, betel nut and cigarette use on hepatitis C virus infection in a large Taiwanese population study

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Background: Hepatitis C virus infection can cause many complications, including chronic liver disease, liver cirrhosis and even liver cancer. Therefore, it is important to detect associated risk factors. The relationship between alcohol, betel nut and cigarette use and hepatitis C virus infection is unclear. Therefore, this cross-sectional study aimed to investigate these relationships in a large cohort of Taiwanese participants.

Methods: A total of 121,421 participants were enrolled from the Taiwan Biobank and stratified into two groups according to with (n = 118,671; 97.7%) or without (n = 2750; 2.3%) HCV infection. In addition, all participants were classified into four groups according to the number of substances use, including history of alcohol drinking, betel nut chewing and cigarette smoking. There were 85,406 (no substance use), 24,299 (one substance use), 8659 (two substance use) and 3057 (three substance use) participants in the four groups, respectively.

Results: Multivariable analysis showed that the participants with old age (p < 0.001), female (p < 0.001), alcohol drinking history (odds ratio [OR] = 1.397; 95% confidence interval [CI] = 1.227-1.592; p < 0.001), betel nut chewing history (OR = 1.567; 95% CI = 1.349-1.821; p < 0.001), cigarette smoking history (OR = 1.225; 95% CI = 1.098-1.366; p < 0.001), high hemoglobin (p < 0.001), low total cholesterol (p < 0.001), high AST (p < 0.001), and high ALT (p = 0.006) were significantly

associated with HCV infection. Furthermore, after multivariable analysis, participants with one substance use (vs. no substance use; OR = 1.222; 95% CI = 1.092-1.366;; $p < 0.001$), two substances use (vs. no substance use; OR = 1.830; 95% CI = 1.577-2.124; $p < 0.001$), and three substances use (vs. no substance use; OR = 2.669; 95% CI = 2.195-3.245; $p < 0.001$) were significantly associated with HCV infection.

Conclusions: In conclusion, alcohol, betel nut and cigarette use was associated with hepatitis C virus infection.