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The risk of new-onset atrial fibrillation associated with sedative hypnotics

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Background: Recently, there are increasing mortality of cardiovascular diseases (CVD) in Taiwan. Atrial fibrillation (AF) is a major risk factor of ischemic stroke. Previous studies focused on the abuse of hypnotics and its use in the elderly. No cohort studies were conducted to investigate the relationship between hypnotic use and CVD risk, especially for AF in Taiwan.

Aim: We aimed to examine the association between hypnotics use and new atrial fibrillation (NAF) in Taiwan.

Methods: A retrospective cohort study was performed based on the National Health Insurance Research Database in Taiwan between January 2004 and December 2013. Patients who had used 20 hypnotics (users) were screened from January 2004 to December 2013. They were excluded if the users with AF in January 2002 to December 2003. Age and gender are matched between user and non-user cohorts at baseline. The follow-up duration is from 2004 to 2013. The endpoint is NAF based on the diagnosis of ICD-9 CM (code 427.31) records. The differences in age, gender, demographic and clinical factors between user cohort and non-user cohort are compared using the Independent t-test or Chi-squared test Cox proportional hazard regression models were used by SAS version 9.4 to explore the relationship between use of hypnotics and NAF. The pre-specified covariates include age, gender, comorbidities, and other unbalanced variables at baseline.

Results: The preliminary results showed that majority use of hypnotics greater than 180 days is 44,139 in Taiwan. After propensity score matching by sex and age, the study groups were 42,817 independently. The use of hypnotics greater than 180 days may then cause increasing incident of atrial fibrillation. (HR=1.22; 95% CI,1.09-1.37).

Biography

Che-Wei Lin is a postgraduate student in Master Program of Pharmaceutical Manufacture in China Medical University, Taiwan. Recent research topics mainly focusing on the risk of new-onset atrial fibrillation associated with sedative hypnotics.