

Obstructive Sleep Apnea Independently Increases the Incidence of atrial fibrillation only in middle age: a Retrospective Population-based Follow-up Study

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AIMs: Obstructive sleep apnea (OSA) is common and increase risk of stroke. Atrial fibrillation (Afib) is a major stroke predisposing factor but whether OSA increase risk of Afib lacks evidence. Here, we aimed to clarify the incidence risk of Afib in OSA patients from the Taiwan large database.

Methods and Results: From 2000-2010, a total of 2699 OSA patients and 13,490 non-OSA patients utilizing 1:5 matching with age, gender, diabetes, hypertension and Charlson comorbidity index were enrolled. When the study follow-up was extended through 2011, the OSA cohort increased Afib approximately 1.63-fold high (CI: 0.78-3.40; *p* value: 0.193) insignificantly in statistics. Subgroup analysis in gender showed the same trend that OSA increase Afib about 1.71 (CI:0.78-3.73; *p* value: 0.18) fold risk in male and 1.19 (CI=0.13-10.82; *p* value=0.881) fold risk in female. In different age group, over 50 years old, the OSA patients increase Afib risk insignificantly and no Afib case under 30 years old. However, between 30-50 years old age group, the OSA cohort increased 3.58-fold high risk of Afib incidence (1.05, 12.25; *p* value=0.042)

Conclusion: OSA patients Independently increase Afib incidence only in middle age.