Clinical Characteristics of Atrial Fibrillation in Firstever Ischemic Stroke Patients; Results from Malaysia National Neurology Registry

Objective: Clinical implications of atrial fibrillation (AF) are stroke and cognitive dysfunction. AF led to substantial economic burden if not well managed and data is limited in developing countries. We aim to describe the characters of first-ever ischemic stroke patients with AF. Methods: All stroke patients diagnosed with first-ever ischemic stroke enrolled in the multiethnic National Neurology Registry were included in this study. Stroke diagnosis was performed in accordance to the World Health Organization recommendations with corresponding imaging, standard blood and urine tests. Baseline characteristics, risk factors, neurological findings, treatment during hospitalization, complications and outcome data were recorded using standardized electronic case report form. Descriptive and logistic regression analysis was performed. Results: 4762 first-ever ischemic stroke patients were available for analysis from July 29, 2009 to June 1, 2015. 311 (6.5%) had AF and they were 5.6 years older than patients without AF (p<0.001). Patients with AF had severe stroke, poorer functional outcome, increased stroke complications and mortality. Stroke recurrence was not an independent AF risk factor. Increasing age, (OR: 1.07, 95% CI: 1.04-1.10), smoking (OR: 2.60, 95%CI: 1.35-5.06) and stroke recurrence (OR: 4.76, 95% CI: 2.14-10.59) were associated with increased 30-day mortality risk after controlling for confounders. While female gender (OR: 2.31, 95% CI: 1.01-5.27), severe stroke (OR: 1.09, 95% CI: 1.02-1.17) and increased hospitalizations days (OR: 1.21, 95% CI: 1.07-1.38) were related to poorer functional outcome among AF patients. Conclusions: Our hospital-based registry indicates that firstever ischemic patients with AF have markedly reduced functional outcome, increased stroke severity and 30-day mortality compared to patients without AF.