

Associated Factors of Stroke Severity among Young Adults Stroke Patients in Malaysia from National Neurology Registry from 2014 to 2018

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ABSTRACT

Introduction: Incidence of stroke in Malaysian young adults is on the rise. The aims of this study were to estimate the proportion of stroke severity and to determine the factors associated with the stroke severity among young adult stroke patients. **Methods:** This was a cross-sectional study of young stroke patients aged between 18-49 years old. Data of patients registered from January 2014 to December 2018 with the first stroke event including socio demographic characteristics, stroke subtype classification, comorbidities characteristics, and other risk factors were retrieved from the National Neurology Registry (NNeur). The stroke severity outcome was measured with NIH stroke scale (NIHSS) and categorized as mild, moderate, or severe. Ordinal logistic regression was used to analyze and quantify the odds ratio and 95% confidence interval. **Results:** A total of 1,421 patients with a mean age of 41 ± 7.64 years old were analysed. The overall proportion of young adult stroke patients was 6.22% and predominantly by males with a ratio of 1.7 to 1. The proportion of mild, moderate and severe were 50.4% (95% CI:0.48,0.54), 41.2% (95% CI:0.38,0.44) and 8.7% (95% CI:0.07,0.10), respectively. In multivariable analysis, ischaemic stroke (OR=2.15, 95% CI:1.43,3.23), atrial fibrillation (OR=3.94, 95% CI:2.08,7.47) and alcohol drinking (OR=1.93, 95% CI:1.06,3.50) were factors that influenced higher odds of having a more severe stroke. **Conclusion:** Of the total, about 50% of young adult patients were categorized as mild stroke. Stroke classification, atrial fibrillation and alcohol drinking were factors that influenced in having a more severe stroke.