

Weekly pattern of stroke onset in an Asian country: a nationwide population-based study

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摘要

Abstract

This study used a nationwide population-based dataset to explore the variation among the days of week of stroke onset within population subgroups defined by age, sex, and stroke type. We used ambulatory care data from the 2002 Taiwan National Health Insurance Research Database, focusing on 42,779 emergency room (ER) visits for stroke that year. All analyses were stratified by sex, age (<60 and ≥ 60 yrs), and type of stroke. Auto-Regressive Integrated Moving Average (ARIMA) was performed to investigate the relationship between daily number of stroke events and holidays and days of the week after adjusting for the effects of seasonality and trends. One-way ANOVA revealed significant differences in stroke ER admissions according to day of week according to age <60 ($p < 0.01$), age ≥ 60 ($p < 0.001$), male ($p < 0.001$), female ($p < 0.001$), ischemic stroke (IS) ($p < 0.001$), and unspecified stroke (UNSP) ($p < 0.001$). However, the analysis by type—subarachnoid hemorrhage and intracerebral hemorrhage—did not show significant relationships between daily emergency room stroke admissions, holidays, or day of the week. The ARIMA regression analyses also showed that Mondays had the highest rate of emergency room admissions for stroke regardless of sex, age, or IS and UNSP types of stroke, after adjusting for seasonality and trends. We conclude that stroke occurs more frequently on Mondays than on the other days of the week, which might be associated with short-term changes in lifestyle or due to the sudden return of stress on the first working day of the week, and on holidays.