## Increased Risk of Developing Stroke among Patients with Bipolar Disorder after an Acute Mood Episode: a Six-year Follow-up Study

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## Abstract

BACKGROUND: Despite cerebrovascular diseases having been reported as one of the major causes of death among patients with bipolar disorder, there is scant information on the risk of stroke among this patient population. This study estimated the relative risk of developing stroke among patients with bipolar disorder in 6 years following hospitalization for an acute mood episode compared with patients undergoing appendectomy. METHODS: Two study cohorts were identified from the Taiwan National Health Insurance Research Database for the year 1998: patients hospitalized with bipolar disorder, and patients undergoing an appendectomy. Follow-up was undertaken to determine whether sampled patients had utilized emergency medical services for the management of any type of stroke in the period 1998-2003. RESULTS: Stroke occurred among 2.97% of patients with bipolar disorder and 1.50% of patients undergoing appendectomy between 1998 and 2003. The adjusted odds ratio of developing stroke, by cohort, shows that after adjusting for demographic characteristics, comorbid medical disorder, and substance or alcohol dependence, patients with bipolar disorder were more likely to develop stroke (OR=2.05; 95% CI=1.73-3.54). LIMITATIONS: The validity of diagnoses, lacking of information on smoking, body mass index, and socioeconomic status, and possible selection bias might compromise the findings. CONCLUSIONS: During the six-year follow-up period, the likelihood of developing stroke was twice as great amongst patients with bipolar disorder as patients undergoing an appendectomy. A requirement exists for the initiation of research providing an understanding of the pathophysiological mechanisms of the association between stroke and bipolar disorder.