

LETTERS

Higher incidence of stroke in patients with dengue fever: Spurious association or causal link?

A recently published population-based cohort study by Li and colleagues¹ suggests that patients in Taiwan with stroke were 2.49 times more likely to have received a diagnosis of dengue infection in the preceding 2 months relative to paired controls. Although uncommon, stroke associated with dengue does meet the criteria for diagnosis of severe dengue based on a guideline from the World Health Organization.²

Li and colleagues report an overall increase in the incidence of stroke attributable to dengue by 1.61 per 1000 person-years during 2015. If these findings are extended to all 43 419 cases of dengue across Taiwan in 2015,³ then 70 cases of stroke would have occurred as a result of dengue infection. This is alarming, particularly considering that there are 96 million cases of symptomatic dengue each year worldwide.⁴

Have the authors identified a spurious association, or is there a genuine causal link between dengue and stroke? Comor-

bidity of dengue and hemorrhagic stroke has been reported in 0.26% of cases (3 of 1148) in India,⁵ and 0.06% of cases (1 of 1585) in Brazil.⁶

Rigorous research is urgently needed to characterize the sequelae of conditions that may arise from dengue infection, including the severity and duration of underlying disease such as diabetes mellitus and hypertension, conditions that may modify the effect of dengue on the risk of stroke. If the effect of dengue on stroke is acute rather than chronic, then there must be a pathophysiologic mechanism involved. A diagnosis of severe dengue under the new classification system presents different and potentially unrelated mechanisms of action.⁷ In short, more clinical data are needed to support the results of Li and colleagues.

Nguyen Tien Huy MD PhD

Epidemiologist and associate professor, Department of Clinical Product Development, Institute of Tropical Medicine, Nagasaki, Japan

Sedighe Karimzadeh

Medical student, School of Medicine, Sabzevar University of Medical Sciences, Sabzevar, Iran

R. Matthew Chico MPH PhD

Assistant professor of public health, Department of Disease Control, London School of Hygiene & Tropical Medicine, London, UK

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