Breakthrough in Neurology 2018

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North-eastern Stroke Research Group and Integrated Epilepsy Research Group, Khon Kaen University. Breakthrough in neurology are composed of update and recent advance in diagnosis and treatment, re-emerging disease and social changes. Recent advances in stroke include reperfusion treatment, prediction of intracranial bleeding after thrombolysis treatment, and stroke networks to improve quality of stroke service system. Diagnosis and treatment of autoimmune encephalitis are focused. There are many studies in newly antiepileptic drugs treatment for intractable seizure. Immunoadsorption for autoimmune encephalitis showed rapid elimination of autoantibodies and has been proven to be an effective therapeutic option as part of multimodal immunotherapy.

Ischemic stroke is associated with aging. It is possible to predict chronological age by measuring age-related changes in DNA methylation from multiple CpG sites across the genome, known as biological age. Ischemic stroke patients were biologically an average 2.5 years older than healthy controls. Antibiotic therapy for preventing infections in acute stroke patients shows no effect on functional outcome or mortality, but significantly reduces the risk of overall infections and no major side effect of preventive antibiotic therapy has been reported. Transient ischemic attack (TIA) is recognized as a major risk factor for stroke. There are important changes in management of TIA patients, with efficient and comprehensive diagnostic assessment to reduce the risk of subsequent ischemic stroke. Quality improvement in acute stroke care in Thailand: the breakthrough collaborative stroke network in stroke, with more than 150 sites in all provinces and large community hospitals for thrombolysis treatment. Mortality rate of ischemic stroke patients is less than 6% and thrombolysis rate is 5.62% in 2017. Stroke network model is associated with the improved guideline adherence for patients with acute stroke in Thailand.

Keywords: Ischemic stroke, Thrombolysis, Antibiotic therapy