SEIZURES IN CORONAVIRUS DISEASE-2019 IN THAILAND: CASE SERIES SURVEY

Pasiri Sithinamsuwan[1], Metha Apiwattanakul[2], Thananya Wongsinin[3], Damrongvit Sukajintanakarn[4], Pattaranun Luangdilok[5], Patama Suttha[6], Chonpivat Treepong[2], Sirirat Suwanrit[7], Chesda Udommongkol[1], Suppachok Kirdlarp[3], Sirikanlaya Poonphol[4], Supoch Tunlayadechanont[8], Kanokwan Boonyapisit[9] and Anannit Visudtibhan[10]

[1]Division of Neurology, Department of Medicine, Phramongkutklao Hospital and College of Medicine Bangkok; [2]Prasat Neurological Institute, Bangkok; [3]Division of Neurology, Chakri Naruebodindra Medical Institute, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Samut Prakan Province; [4]Division of Neurology, Department of Medicine, Rajavithi Hospital, Bangkok; [5]Department of Medicine, Trang Hospital, Trang Province; [6]Bamrasnaradura Infectious Diseases Institute, Nonthaburi Province; [7]Rajprachasamasai Institute, Samut Prakan Province; [8]Division of Neurology, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok; [9]Division of Neurology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok; [10]Division of Neurology, Department of Pediatrics, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Abstract. Medical services have been affected worldwide since the outbreak of COVID-19 pandemic. A number of patients with COVID-19 develop neurological manifestations, such as stroke, encephalopathy and seizures. In order to determine the relationship between COVID-19 and seizure disorders, a review of case series from 1 December 2019 to 7 July 2020 from seven hospitals in Thailand, which adequately detailed seizure occurrence or neurological manifestations, was carried out. Focus was placed on relationship of seizure/epilepsy and risk of COVID-19 infection, possible epileptogenic effects of the viral infection and management plans for control of seizures. Prevalence of acute symptomatic seizures among COVID-19 patients was 0.57%, indicating epilepsy patients in general were not more susceptible to COVID-19 infection. Issues on adverse interactions between antiepileptic drugs and antivirals, limited access to investigative diagnostic procedures, *eg* electroencephalography, CSF fluid and neuroimaging were of concern. In conclusion, prevalence of seizure in individuals with COVID-19 is low, but suitable plans for seizure management, antiepileptic medication-withdrawal seizures in patients with epilepsy during COVID-19 pandemic and implementation of appropriate telemedicine systems should be addressed.

Keywords: case study, COVID-19, epilepsy, seizure, Thailand

Correspondence: Pasiri Sithinamsuwan, Division of Neurology, Department of Medicine, Phramongkutklao Hospital and Medical College, Bangkok 10400, Thailand.
Tel: +66 (08) 3236 7772
E-mail: s.pasiri@pcm.ac.th, pasiripmk@gmail.com