

PREDICTORS OF PNEUMONIA AND SEVERE PNEUMONIA IN PATIENTS WITH CORONAVIRUS DISEASE 2019 AT A TERTIARY-CARE HOSPITAL, THAILAND

Sirawat Srichatrapimuk¹, Kulapong Jayanama¹, Suppachok Kirdlarp², Kanin Thammavaranucupt¹, Supawadee Suppadungsuk¹, Thananya Wongsinin¹, Nithita Nanthatanti¹, Watchara Lohawijarn², Thanyakamol Phongnarudech², Katathep Wiputhanuphongs², Sithakom Phusanti¹, Dhanesh Pitidhammabhorn¹ and Somnuek Sungkanuparph¹

¹Ramathibodi Medical School, ²Ramathibodi Chakri Naruebodindra Hospital, Chakri Naruebodindra Medical Institute, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Samut Prakan, Thailand

Abstract. Clinical spectrum of coronavirus disease 2019 (COVID-19) encompasses asymptomatic to severe pneumonia. Clinical characteristics of pneumonia and severe pneumonia in patients with confirmed COVID-19 infection admitted to a university hospital in Thailand were recorded and factors predicting pneumonia and severe pneumonia were determined using a Cox-regression analysis. Of 144 patients, mean \pm SD age was 39 ± 13 years, with 42% males. Following admission, 51% of patients developed pneumonia within median period of 7 days from onset of illness, among whom 27% progressed to severe pneumonia. Multivariate analysis showed age ≥ 40 years, body mass index ≥ 25 kg/m², absolute lymphocyte count < 1500 cells/mm³, and serum lactate dehydrogenase (LDH) level ≥ 200 U/l at admission were significant factors associated with pneumonia, while severe pneumonia was associated with male gender, room-air oxygen saturation $< 97\%$ and serum LDH level ≥ 300 U/l at admission. These findings should be of assistance in predicting COVID-19 patients at risk of developing pneumonia and those progressing to the severe form, allowing preparation for close monitoring and prompt management of such patients.

Keywords: coronavirus, COVID-19, pneumonia, predicting factor.

Correspondence: Prof Somnuek Sungkanuparph, Chakri Naruebodindra Medical Institute, Faculty of Medicine Ramathibodi Hospital, Mahidol University, 111 Moo 14, Bang Phli, Samut Prakan 10540, Thailand.
Tel: +66 (0) 2839 6000; Fax: +66 (0) 2839 5147
Email: somnuek.sun@mahidol.ac.th