

中文題目：台灣 COVID-19 病患住院中次發性感染之樣態分析

英文題目：Secondary infections in patients hospitalized with COVID-19: First report from Taiwan

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Background: Secondary infections by other pathogens may occur in Coronavirus disease 2019 (COVID-19) inpatients after admission. Such a relevant study in Taiwan has not been reported yet.

Methods: Confirmed COVID-19 inpatients from January 1, 2020 to July 31, 2021 were enrolled. Types and identified pathogens from COVID-19 inpatients with secondary infections were analyzed. The clinical characteristics of included COVID-19 patients with and without secondary infection were reviewed and compared.

Results: Out of 204 included patients, 32 (15.6%) patients experienced at least 1 infectious episode. Out of 113 recorded episodes of infection, the predominant type was bacterial infection (88 of 113 infections, 77.8%); the most frequently isolated bacteria were *Acinetobacter* spp. followed by *Stenotrophomonas maltophilia*. With regard to secondary viral infections (19 of 113, 16.8%), the Epstein-Barr virus ranked the first place among identified viruses. Four (3.5%) and 2 (0.9%) of 113 infectious episodes were caused by fungi and atypical pathogens. A multivariate analysis revealed that steroid use was an independent factor for secondary infection [odds ratio (OR): 6.97; 95% confidence interval (CI): 1.14–42.43; $p = 0.035$]. Patients with secondary infection were associated with increased 28-day and in-hospital mortality (18.8% vs. 5.8% and 34.5% and 5.8%, $p = 0.023$ and < 0.01 , respectively) and longer hospital stay (34 vs. 19 days, $p < 0.001$) comparing to those without secondary infection.

Conclusion: Our study revealed a unique local epidemiology of secondary infection among COVID-19 inpatients in Taiwan. Patients with secondary infection were associated with increased mortality and prolonged hospital stay.