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Interstitial lung disease increases susceptibility to and severity of COVID-19

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The risks of COVID-19 and severe presentation were significantly higher in patients with ILD than in those without ILD. Clinicians should be aware of the increased risk of COVID-19 in their ILD patients and manage them appropriately amid this pandemic. https://bit.ly/3guOE6d

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Abstract

Background There are limited data regarding the relationship between interstitial lung disease (ILD) and the natural course of COVID-19. In this study, we investigate whether patients with ILD are more susceptible to COVID-19 than those without ILD and evaluate the impact of ILD on disease severity in patients with COVID-19.

Methods A nationwide cohort of patients with COVID-19 (n=8070) and a 1:15 age-, sex- and residential area-matched cohort (n=121 050) were constructed between 1 January 2020 and 30 May 2020 in Korea. We performed a nested case–control study to compare the proportions of patients with ILD between the COVID-19 cohort and the matched cohort. Using the COVID-19 cohort, we also evaluated the risk of severe COVID-19 in patients with ILD *versus* those without ILD.

Results The proportion of patients with ILD was significantly higher in the COVID-19 cohort than in the matched cohort (0.8% *versus* 0.4%; p<0.001). The odds of having ILD was significantly higher in the COVID-19 cohort than in the matched cohort (adjusted OR 2.02, 95% CI 1.54–2.61). Among patients in the COVID-19 cohort, patients with ILD were more likely to have severe COVID-19 than patients without ILD (47.8% *versus* 12.6%), including mortality (13.4% *versus* 2.8%) (all p<0.001). The risk of severe COVID-19 was significantly higher in patients with ILD than in those without ILD (adjusted OR 2.23, 95% CI 1.24–4.01).

Conclusion The risks of COVID-19 and severe presentation were significantly higher in patients with ILD than in those without ILD.