

## Clinical Features of Admitted Patients with COVID-19 and Underlying Rheumatic Diseases

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### ABSTRACT

**Objective:** This study aimed to describe the clinical manifestations of admitted patients with coronavirus disease 2019 (COVID-19) who had underlying rheumatic diseases.

**Methods:** This study is a retrospective and case-control matched study. Demographic data were collected from 4,966 patients admitted for COVID-19 in Busan Medical Center from February 2020 to November 2021. Among these patients with COVID-19, we identified those who had underlying rheumatic disease through a medical record review. The controls without underlying rheumatic diseases were randomly sampled and matched by age and sex at a 1:4 ratio. The clinical, laboratory and radiographic findings of COVID-19 were compared between the two groups. To evaluate the risk for severe/critical COVID-19, multivariable logistic regression models were applied.

**Results:** Altogether, thirty-eight patients with rheumatic diseases and one hundred fifty-two matched controls were included. The mean age was 53.9 years old, and the female sex was 73.7% in both groups. More patients with underlying rheumatic diseases showed some COVID-19 manifestations, such as cough, sputum, dyspnea and chest discomfort, than the control group ( $p < 0.01$ ). The proportion of severity of COVID-19 and number of deaths were not significantly different between patients with rheumatic disease and control subjects. There was no significant difference in laboratory findings between the groups. All patients were given chest X-ray examinations, and the proportion of patients with lung infiltration on chest X-ray at admission was not different in either group. The risk for severe/critical COVID-19 was more than 60 years old, cardiovascular diseases and diabetes, but not rheumatic diseases.

**Conclusions:** Our data suggested that COVID-19 patients with underlying rheumatic diseases showed similar courses compared to patients without rheumatic diseases.

**Keywords:** COVID-19, Rheumatic diseases, Admission, Clinical features

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