

Clinical Characteristics of Coronavirus Disease 2019 in China

Guan W, Ni Z, Hu Y, Liang W, Ou C, et al. *N Engl J Med.* 2020;382(18):1708-1720.

Introduction:

COVID-19 emerged in December 2019 and spread rapidly throughout China. While similar to the earlier SARS-CoV, it is important to identify the unique clinical characteristics and to define severity of the novel coronavirus causing COVID-19 disease. The World Health Organization (WHO) declared COVID-19 a global public health emergency further illustrating the need to understand the clinical presentation and underlying pathology of COVID-19.

Study design & Objective:

A retrospective review of medical records to identify the clinical characteristics of patients diagnosed with COVID-19 in hospital and outpatient settings. The primary composite endpoints included admission to an intensive care unit (ICU), use of mechanical ventilation or death. Secondary endpoints included rate of death and time to primary composite endpoints.

Study population:

1099 patients with laboratory confirmed diagnosis of COVID-19 from 552 hospitals and outpatient settings in 30 provinces, regions, and municipalities in mainland China. Data were collected from December 2019-January 29, 2020.

Results:

Medical data were extracted from patient records (n=1099) to reveal the following:

- Median patient age was 47 years, and 41.9% were female; patients with severe disease were older by a median of 7 years compared to less severe cases.
- Median incubation period was 4 days (interquartile range, 2-7) with only 1.9% of patients reporting exposure to wildlife. 25.9% of patients had not visited the city of Wuhan and had no contact with its residents.
- 23.7% of patients had at least one coexisting illness, e.g., hypertension or chronic obstruction pulmonary disease. The presence of coexisting disease was more common in patients with severe disease (38.7% vs. 21%).
- The most common symptoms and diagnostic findings at hospital admission included: pneumonia-91.1%; fever-43.8%on admission, 88.7% during hospitalization; abnormal chest by computed tomography-86.2%, lymphocytopenia-83.2%; cough- 67.8%; thrombocytopenia- 36.2%; leukopenia- 33.7%; elevated C-reactive protein; nausea/vomiting-5.0%; diarrhea-3.8%; adult respiratory distress syndrome- 3.4%.
- Most patients received intravenous antibiotic therapy (58%), and 35.8% received oseltamivir therapy. Oxygen was given in 41.3% with mechanical ventilation required for 6.1% of patients.
- Median duration of hospitalization was 12.0 days (mean 12.8).

Conclusions:

In patients hospitalized with COVID-19, the most common symptoms were fever and cough. Frequent diagnostic findings were abnormal chest by computed tomography and lymphocytopenia. Severe illness occurred in 15.7% of diagnosed admissions with 5.0% requiring admission to the ICU and 2.3% requiring mechanical ventilation and 1.4% ending in death.

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