

Study shows one quarter of hospitalized young patients aged 18-39 years with COVID-19 developed pneumonia

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New research to be presented at the ESCMID Conference on Coronavirus Disease (ECCVID, held online from 23-25 September) shows that one quarter of hospitalised younger patients with COVID-19 aged 18-39 years developed pneumonia, underlining the danger the disease represents to young people. The study is by Assistant Professor Hyun ah Kim, Keimyung University Dongsan Hospital, Daegu, and Dr. Hyo-Lim Hong, Daegu Catholic University Medical Center, Daegu, South Korea, and colleagues.

Many countries that had been controlling their COVID-19 pandemic are now seeing a resurgence of the virus, especially among young people. The authors say: "The low alertness of young people has become a social problem around the world, since it is known that the progress toward severe cases is low in [young people](#)."

In this study, the authors analysed the incidence of [pneumonia](#) and clinical characteristics of young patients. The retrospective study was conducted on [adult patients](#) aged 18 to 39 who were admitted to 6 hospitals in Daegu, South Korea (one of the

earliest hotspots of the pandemic) from February 18 to March 31, 2020. The patient group without pneumonia and the patient group with pneumonia were compared.

A total of 315 hospitalised, isolated patients were analysed. Of these, 205 (65%) were female (65.1%) and 32 (10.2%) patients were asymptomatic. In South Korea, even asymptomatic patients were hospitalised and quarantined once confirmed COVID-19 positive if there were beds available in hospitals. Symptoms were presented in the following order: cough (168, 53%), [sore throat](#) (83, 26%), fever (82, 26%), rhinorrhoea/runny nose (99, 31%), myalgia (muscle pain) (62, 20%), chill (51, 16%), diarrhoea (46, 15%).

There were 71 (23%) confirmed cases of pneumonia on chest X-rays. Of the 85 patients who had a CT scan performed, 43 were confirmed to have pneumonia. Eleven cases of pneumonia were diagnosed in CT who had previously had normal X-ray results. Overall, pneumonia was confirmed in a total of 83 (26%) of patients.

In around a quarter (16/71, 23%) of cases, chest X-rays remained abnormal on the last chest X-ray before hospital discharge, which for asymptomatic patients was 10 days after diagnosis; for patients with symptoms hospital discharge occurred after two consecutive negative tests for COVID-19.

Severe pneumonia was reported in 7 (2.2%) cases, with one patient needing mechanical ventilation. Symptoms of fever, cough, diarrhoea and shortness of breath were statistically significantly more frequent in the pneumonia group. Blood test results showed particularly high C-reactive protein (a sign of systemic inflammation) in the pneumonia group: more than 8 times higher than in patients without pneumonia (2.47 vs. 0.3 mg/L). There was

also one asymptomatic case that subsequently developed pneumonia.

The authors conclude: "Pneumonia occurred in 26% of young hospitalised patients. Severe pneumonia presented in 2% of cases, and one patient with no other medical history required mechanical ventilation. Young people should also be aware of the risk of pneumonia or severe pneumonia due to COVID-19."

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