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Characteristics and outcomes of asthmatic patients with COVID-19 pneumonia who require hospitalisation

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Asthmatic patients were not overrepresented among those with severe pneumonia due to SARS-CoV-2 infection who required hospitalisation. None presented with an asthma exacerbation. Worst outcomes were observed mainly in patients with major comorbidities. https://bit.ly/303djG6

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ABSTRACT

Background: Viral respiratory infections are the main causes of asthma exacerbation. The susceptibility of patients with asthma to develop an exacerbation when they present with severe pneumonia due to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection is unknown. The objective of this study was to investigate the characteristics and outcomes of asthmatic patients with coronavirus disease 2019 (COVID-19) pneumonia who required hospitalisation during the spring 2020 outbreak in Paris, France.

Methods: A prospective cohort follow-up was carried out from 15 March to 15 April 2020 in Bicêtre Hospital, University Paris-Saclay, France. All hospitalised patients with a SARS-CoV-2 infection who reported a history of asthma were included.

Results: Among 768 hospitalised patients, 37 (4.8%) reported a history of asthma, which had been previously confirmed by a pulmonologist in 85% of cases. These asthmatic patients were mainly female (70%) and nonsmokers (85%), with a median age of 54 years (interquartile range (IQR) 42–67 years). None of them presented with an asthma exacerbation. 22 (59%) had major comorbidities and 31 (84%)

had a body mass index $\geqslant 25$ kg·m^{-2}. The most common comorbidities were obesity (36%), hypertension (27%) and diabetes (19%). All patients had a confirmed diagnosis of COVID-19 pneumonia on computed tomography of the chest. Eosinopenia was a typical biological feature with a median count of 0 cells·mm^{-3} (IQR 0–0 cells·mm^{-3}). 11 patients (30%) were admitted into the intensive care unit, with three deaths (8.1%) occurring in the context of comorbidities.

Conclusion: Asthma patients were not overrepresented among those with severe pneumonia due to SARS-CoV-2 infection who required hospitalisation. The worst outcomes were observed mainly in patients with major comorbidities.