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The impact of COVID-19 on patients with asthma

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The increased risk of hospitalisation due to COVID-19 in patients with asthma is largely associated with age and related comorbidities. ICS and biologics may be associated with a protective effect against the most severe manifestations of COVID-19. <https://bit.ly/37yhr5b>

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ABSTRACT

Background: An association between the severity of coronavirus disease 2019 (COVID-19) and the presence of certain chronic conditions has been suggested. However, unlike influenza and other viruses, the disease burden of COVID-19 in patients with asthma has been less evident.

Objective: To understand the impact of COVID-19 in patients with asthma.

Methods: Using big-data analytics and artificial intelligence through the SAVANA Manager clinical platform, we analysed clinical data from patients with asthma from January 1 to May 10, 2020.

Results: Out of 71 182 patients with asthma, 1006 (1.41%) suffered from COVID-19. Compared to asthmatic individuals without COVID-19, patients with asthma and COVID-19 were significantly older (55 *versus* 42 years), predominantly female (66% *versus* 59%), smoked more frequently and had higher prevalence of hypertension, dyslipidaemias, diabetes and obesity. Allergy-related factors such as rhinitis and eczema were less common in asthmatic patients with COVID-19 ($p < 0.001$). In addition, higher prevalence of these comorbidities was observed in patients with COVID-19 who required hospital admission. The use of inhaled corticosteroids (ICS) was lower in patients who required hospitalisation due to COVID-19, as compared to non-hospitalised patients (48.3% *versus* 61.5%; OR 0.58, 95% CI 0.44–0.77). Although patients treated with biologics ($n = 865$; 1.21%) showed increased severity and more comorbidities at the ear, nose and throat level, COVID-19-related hospitalisations in these patients were relatively low (0.23%).

Conclusion: Patients with asthma and COVID-19 were older and at increased risk due to comorbidity-related factors. ICS and biologics are generally safe and may be associated with a protective effect against severe COVID-19 infection.