

For the Patient

The full report is titled “Outcomes among Patients with COVID-19 and Asthma: A Systematic Review and Meta-analysis.” by Andrea N. Sitek, Justine M. Ade, Sergio E. Chiarella, Rohit D. Divekar, Mitchell M. Pitlick, Vivek N. Iyer, Zhen Wang, Avni Y. Joshi. The report appears in the Jul-Aug 2021 issue of *Allergy Asthma Proceedings* (volume 42, pages 267–273)

For the Patient is provided to physicians so that the patients can better understand the language of modern medicine.

For the Patient is written by the editors (Bellanti, JA and Settignano, RA) and provided to practitioners so that patients can better understand the usefulness of new information resulting from medical research.

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OUTCOMES AMONG PATIENTS WITH COVID-19 AND ASTHMA

It is well known that viral respiratory illnesses can trigger asthma exacerbation, contributing to increased morbidity and mortality. Although numerous studies have examined the relationship between COVID-19 and asthma the impact of asthma on patients with COVID-19 remains controversial and incompletely understood. On the one hand, the Centers for Disease Control and Prevention (CDC) has identified moderate-to-severe asthma as a possible risk factor for severe COVID-19 among adults while, in contrast, as of January 2021, the American Academy of Allergy, Asthma and Immunology (AAAAI) has specified that asthma is unlikely to represent a risk factor for severe COVID-19. To resolve these seemingly conflicting data, a report in this issue of the *Proceedings*, by Sitek and coworkers from the Division of Allergic Diseases, Department of Medicine, Mayo Clinic, Rochester, MN, determined whether patients with asthma are at increased risk of developing severe COVID-19 compared to those without asthma by comprehensively reviewing the available literature.

Why Did the Researchers Do This Particular Study?

The primary goal of the study was to determine whether patients with asthma are at increased risk of developing severe COVID-19 compared to those without asthma.

Who or What Was Studied?

A total of 389 studies were identified through database searches. After abstract and full text screening, 16 observational studies with 92,275 patients were included in the analysis. Of which, 15 were retrospective and 1 was a prospective cohort. The average age of study subjects was 39.6 years with 48% females.

How Was the Study Done?

A comprehensive database search was conducted for studies evaluating outcomes among patients with COVID-19 and underlying asthma published from January 1, 2019 to October 2, 2020.

What Were the Limitations of the Study?

The report emanates from a single center which may have influenced the results. In addition, although all studies consistently used results of PCR testing to confirm diagnosis of COVID-19, each used variable approaches to confirm the diagnoses of asthma.

What Are the Implications of the Study?

The study shows that among patients with COVID-19 infection, the presence of asthma was not associated with a significant increased risk of hospitalization, length of hospitalization, ICU admission or death. Although these results are encouraging and provide some reassurance for patients and health care providers, future studies will be required to identify specific underlying biologic mechanisms for the findings using more rigorous prospective methodologies. □