Omicron appears more deadly than seasonal influenza, study suggests

April 7 2023

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Adults hospitalized with the SARS-CoV-2 omicron variant have a higher death rate than those hospitalized with seasonal influenza, even though omicron is considered less virulent with lower case fatality rates than the

delta and alpha strains. This is suggested by new research being presented at this year's European Congress of Clinical Microbiology & Infectious Diseases (ECCMID) in Copenhagen, Denmark (15–18 April).

The study by Dr. Alaa Atamna and colleagues from the Rabin Medical Center at Belinison Hospital in Israel found that adults (18 years or older) hospitalized with influenza were 55% less likely to die within 30 days than those hospitalized with omicron during the 2021–2022 influenza season.

Influenza and COVID-19 are both respiratory diseases with similar modes of transmission. In December 2021, influenza re-emerged in Israel after it went undetected since March 2020. At the same time, the omicron had substituted delta as the predominant variant. But data directly comparing omicron with seasonal influenza are scarce.

To find out more, researchers compared the clinical outcomes of patients hospitalized with COVID-19 (omicron variant) and those hospitalized with influenza at a large academic hospital in Israel.

Consecutive patients hospitalized with laboratory confirmed COVID-19 (167 patients; average age 71 years, 58% male) and influenza infection (221 patients; average age 65 years, 41% male) during December 2021 and January 2022 were included in the study.

Overall, 63 patients died within 30 days—19 (9%) admitted with influenza and 44 (26%) hospitalized with omicron.

Patients with omicron tended to have higher overall comorbidity scores, needed more assistance performing activities of daily living (e.g., washing and dressing), and were more likely to have high blood pressure and diabetes, whereas asthma was more common in those hospitalized with influenza.

Respiratory complications and need for oxygen support and mechanical ventilation were also more common in omicron cases than in seasonal influenza.

"A possible reason for the higher omicron death rate is that patients admitted with omicron were older with additional major underlying illnesses such as diabetes and chronic kidney disease," says Dr. Atamna. "The difference might also be due to an exaggerated immune response in COVID-19, and that vaccination against COVID-19 was far lower among patients with omicron."

He continues, "The double whammy of overlapping influenza and COVID-19 epidemics will increase the complexity of disease and the burden on health systems. There is one basic step people can take that may alter the trajectory of either epidemic, get the vaccines for flu and COVID-19, especially if you are older and have underlying illnesses."

The authors point out that the study was observational so can't prove causation, and it was conducted in one hospital in Israel so the results may not apply to other countries and populations. And they cannot rule out the possibility that other unmeasured factors such as influenza and COVID19 vaccination status may have influenced the results. They also note that the excess mortality observed for omicron could be the result of an influenza season that was less severe than usual. Finally, the study included only hospitalized patients, so could not estimate the proportion of hospitalized patients in the total number of infected patients.

This information is based on abstract 0314 at the European Congress of Clinical Microbiology & Infectious Diseases (ECCMID) annual meeting. The material has been peer reviewed by the congress selection committee. There is no full paper available at this stage and, as this is an early release from ECCMID, the poster is not yet available. The work has been submitted to a medical journal for publication.

Provided by European Society of Clinical Microbiology and Infectious Diseases