

Summary for Patients: Comparison of Patients Infected With Delta Versus Omicron COVID-19 Variants Presenting to Paris Emergency Departments

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What is the problem and what is known about it so far?

At the end of 2021, the Omicron variant of SARS-CoV-2 emerged in many parts of the world. Before that, the Delta variant was the major variant causing COVID-19. It seemed that people infected with Omicron were less sick than those infected with Delta. However, to determine whether the differences were due to the variant or the types of people who were getting infected during the Omicron surge, studies are needed that adjust for patient factors like age, underlying medical conditions, and vaccination.

Why did the researchers do this particular study?

The researchers wanted to compare baseline characteristics and in-hospital outcomes of patients who presented to emergency departments (EDs) with SARS-CoV-2 infection with the Delta and Omicron variants.

Who was studied?

The researchers studied 1716 patients who presented to 13 EDs in Paris, France, from 29 November 2021 to 10 January 2022, who were diagnosed with SARS-CoV-2 infection, and who had testing to see which variant was responsible for the infection. Of the patients studied, 818 had Delta, and 898 had Omicron.

How was the study done?

The researchers collected information on patient age, medical conditions, symptoms, and vaccination status at the time of presentation to the ED. Then they collected data on outcomes, including hospitalization, intensive care unit admission, mechanical ventilation, and in-hospital death.

What did the researchers find?

Patients infected with the Omicron variant were younger, were more vaccinated, and had a lower rate of shortness of breath than patients who were infected with the Delta variant. Compared with Delta and accounting for patient characteristics, Omicron infection was associated with a lower risk for hospitalization, intensive care unit admission, mechanical ventilation, and in-hospital death.

What were the limitations of the study?

Every patient who presented to the 13 study EDs was not tested for the variant. This study included only those who had the variant tested. The researchers also did not follow patients who were not admitted to the hospital.

What are the implications of the study?

Compared with the Delta variant, infection by the Omicron COVID-19 variant infects different types of people and is associated with better outcomes, including higher survival.