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OMICRON VARIANT OF SARS-COV-2 CAN EVADE IMMUNITY PROVIDED BY VACCINES: ICMR STUDY

Relevant for: Science & Technology | Topic: Biotechnology, Genetics & Health related developments

The current study noted that breakthrough infection was higher among healthcare workers as reported in previous studies. File | Photo Credit: Shiv Kumar Pushpakar

Omicron, a variant of SARS-CoV-2, can evade immunity provided by vaccines, states a new study published by the Indian Council of Medical Research (ICMR). It points to the need to further explore the Omicron variant's immune evasion properties, which may be essential in planning for vaccine advocacy in the future in India.

The study, undertaken by ICMR's Regional Medical Research Centre (ICMR-RMRC), Gorakhpur, and the maximum containment facility of the National Institute of Virology (ICMR-NIV), Pune, also advocates for universal administration of third or precautionary doses across all age groups irrespective of comorbidity status.

Titled 'Omicron BA.2 lineage predominance in severe acute respiratory syndrome coronavirus 2 positive cases during the third wave in North India', the study was published on November 2 in *Frontiers in Medicine*, a peer-reviewed open access medical journal.

"The current study showed a predominance of the Omicron BA.2 variant outcompeting the BA.1 over a period in eastern Uttar Pradesh. Most of the cases had a breakthrough infection following the recommended two doses of vaccine with four in five cases being symptomatic. There is a need to further explore the immune evasion properties of the Omicron variant,'' the study said.

It further stated that fully vaccinated individuals having the Omicron infection (breakthrough infection) were higher in the present study compared with the Chennai study, but lesser than that reported in the Delhi study done previously.

The current study noted that breakthrough infection was higher among healthcare workers as reported in previous studies. It also highlights the median duration from the second dose to Omicron infection to be around six months.

"Recent studies on severe acute respiratory syndrome coronavirus 2 [SARS-CoV-2] reveal that Omicron variant BA.1 and sub-lineages have revived the concern over resistance to antiviral drugs and vaccine-induced immunity. The present study then aims to analyse the clinical profile and genome characterisation of the SARS-CoV-2 variant in eastern Uttar Pradesh, north India,'' a senior official at ICMR said.

For the study, whole genome sequencing (WGS) was conducted on 146 SARS-CoV-2 samples obtained from individuals who tested coronavirus disease 2019 (COVID-19) positive between the period of January 1, 2022, and February 24, 2022, in three districts of eastern U.P.

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