

LETTER TO THE EDITOR

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Emergence of XBB.1.16—a new recombinant COVID-19 variant driving the surge of COVID-19 cases in India

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Dear Editor,

Since the beginning of COVID-19 Pandemic, the world has witnessed the persistent evolution of the SARS-CoV-2 virus leading to novel and recombinant variants [1]. One of the main factors that have contributed to the virus's resilience and adaptability is its ability to accumulate genetic variations over time, resulting in new strains that are more contagious, virulent, and resistant to existing treatments and vaccines [2]. Active genomic surveillance is playing a key role in mitigating the risk of new variants and control the spread of the virus across the globe [3]. As per the reports by the Ministry of Health and Family Welfare, Government of India, there is a sudden spike in the number of COVID-19 cases in India since March 2023 [4]. The surge in COVID-19 cases is

due to a new recombinant SARS-CoV-2 variant XBB.1.16 (also called as Arcturus) [5].

On March 22, the World Health Organization (WHO) added the XBB 1.16 variant, to its list of SARS-CoV-2 variants under monitoring. XBB 1.16 is a recombinant of two other variants, BA.2.10.1 and BA.2.75, and has three additional mutations in the spike protein of SARS-CoV-2, namely E180V, F486P, and K478R, compared to its parent lineage XBB [5]. Currently, 29 countries have reported cases of the XBB 1.16 variant, which is showing an increasing trend. Mutations in the position 478 of the spike protein has been linked to decreased antibody neutralization, increased transmissibility, and pathogenicity. According to current reports, there is no evidence to suggest that the XBB.1.16 variant of SARS-CoV-2 is more severe, as there has been no noticeable increase in hospitalizations, ICU admissions, or deaths due to this variant [6]. However, it is essential to remain cautious and continue following anti-COVID measures to prevent the spread of the virus [7, 8].

Despite not being more severe, the XBB.1.16 variant is responsible for the recent surge in COVID-19 cases in India, with at least 50% of the genome-sequenced samples testing positive for this variant [6]. To prevent the spread of the virus and protect ourselves and others, it is crucial to continue practicing safety measures such as wearing masks, practicing social distancing, and maintaining good hand hygiene [7]. Additionally, getting vaccinated is an effective way to prevent the emergence of new variants that could potentially be more severe or transmissible [2].

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In conclusion, XBB.1.16 SARS-CoV-2 variant is posing a threat to control COVID-19 in India and globally. It is essential to strictly follow preventive measures such as wearing masks, maintaining physical distancing, and frequently washing hands to prevent further rise in COVID-19 cases. Stringent measures must be taken to identify and isolate cases of the XBB.1.16 variant, including contact tracing, testing, and quarantine measures. It is also important to ramp up genomic surveillance to monitor the XBB.1.16 variant cases and respond promptly to contain their spread. Public awareness campaigns must be intensified to educate people about the importance of adherence to preventive measures and vaccination. Finally, it is essential to adopt a coordinated and evidence-based approach to controlling the pandemic by involving all stakeholders, including health professionals, policymakers, and the community.

Abbreviations

COVID-19	Corona Virus Disease 2019
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2
ICU	Intensive Care Unit
WHO	World Health Organization

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