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Editorial

XBB.1.5 the most transmissible descendant yet of the omicron variant of SARS-CoV-2- Is it the beginning of a new wave of the COVID-19 pandemic?

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The global chaos due to the pandemic of COVID-19 has led to a substantial amount of morbidity and mortality.¹ The disease that originated in Wuhan, China, and became a global pandemic is caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).² From the first case reported on December 2019 until 11th January 2023, there are a total of 669,604,998 cases with 6,718,550 fatalities and 640,926,819 recoveries.^{2,3} The virus is an RNA virus with a propensity to mutate, resulting in several variants of this coronavirus that have been reported.⁴ The latest to add to the tally is the XBB.1.5 descendant of the omicron variant of SARS-CoV-2.⁵ This subvariant is termed the ‘most transmissible’ by the WHO.⁶ And the same is evident in a steep rise in the total number of cases with this new variant from various parts of the world.⁵

As per the Centers for Disease Control and Prevention (CDC) in the US this new variant is found to be present in 40% cases of all new confirmed COVID-19 cases.⁷ And this subvariant is constituting 40.5% of all the circulating strains of coronavirus in the US.⁸ It is nicknamed ‘Kraken’ and there are reports of this subvariant from around 28 countries.⁹

SARS-CoV-2 resulting in COVID-19 is persistently altering its genetic code and accumulating mutations.⁸ XBB.1.5 is considered to be an outcome of mutations in the multiple strains which were in circulation swapping parts.⁵

An offshoot of SARS-CoV-2 variant XBB this XBB.1.5 is highly transmissible due to a suite of mutations in its spike protein which helped this variant to dodge antibodies.¹⁰ This is also evident in a recent surge in the number of cases in countries like Singapore.¹⁰ This rare amino-acid alteration, in the spike protein, is known as F486P and it improves the subvariant’s capacity to cling to the human ACE2 receptor, which SARS-CoV-2 uses to invade cells.¹⁰ Further, this mutation does not appear to impact the XBB.1.5’s prowess at escaping antibodies.¹⁰

Although, this new subvariant is highly transmissible still there is no rise in deaths. However, there was an increase in the number of hospital admissions by 7% and ICU admissions by 11% in the US.⁸ This variant is known to affect even those who are vaccinated or previously infected but the impact is supposed to be less as compared to those who are still non-vaccinated.⁵ Therefore healthcare authorities across the globe are emphasizing on the need for vaccination and booster doses for those who have not opted for the same as yet.

To conclude, this new subvariant i.e., XBB.1.5 is supposed to have very high transmissibility but large-scale population data are lacking, especially on its impact resulting in morbidity and mortality. Further, in the Northeastern US, this variant has led to a surge in cases which could also be due to a cold snap in the area or holiday gatherings.¹⁰ Thus, it is a little early to jump to conclusions but it is high time to remain alert and to continue to

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practice COVID-appropriate behavior. Those who are yet to be vaccinated should immediately get it done and travel to infected countries should be avoided. Proactive policy-making and its implementation could be a boon in avoiding another COVID-19 wave.

Conflicts of Interest

None declared.


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References

1. Yadav S. Stealth omicron-A new substrain in an ongoing pandemic of COVID-19. *IP Indian J Immunol Respir Med.* 2022;7(1):4–5.
2. Yadav S, Rawal G. Coronavirus pandemic- A threat to humanity. *IP Indian J Immunol Respir Med.* 2020;5(1):1–3.
3. Coronavirus cases. Last accessed 2023 on January 11. Available from: <https://www.worldometers.info/coronavirus/>.
4. V'kovski P, Kratzel A, Steiner S, Stalder H, Thiel V. Coronavirus biology and replication: implications for SARS-CoV-2. *Nat Rev Microbiol.* 2021;19(3):155–70.
5. Nirappil F, Weber L, The Washington Post. New variant XBB.1.5 is 'most transmissible' yet, could fuel covid wave; 2023. Available from: <https://www.washingtonpost.com/health/2023/01/08/new-covid-variant-xbb15/>.
6. WHO. Virtual Press conference on global health issues transcript - 4 January 2023. Last accessed 2023 on January 11. Available from: <https://www.who.int/publications/m/item/virtual-press-conference-on-global-health-issues-transcript---4-january-2023>.
7. CDC. Covid data tracker weekly review. Last accessed 2023 on January 11. Available from: <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covidview/index.html>.
8. Xavier J. Latest omicron subvariant XBB.1.5 now causing 40% of Covid cases In US: CDC. Last accessed 2023 on January 11. Available from: <https://www.rttnews.com/3334581/latest-omicron-subvariant-xbb-1-5-now-causing-40-of-covid-cases-in-us-cdc.aspx?refresh=1>.
9. What's kraken? 4 things to know about the new XBB.1.5 COVID variant. Last accessed 2023 on January 11. Available from: <https://www.nebraskamed.com/COVID/health/whats-kraken-4-things-to-know-about-the-new-xbb15-covid-variant>.
10. Callaway E. Coronavirus variant XBB.1.5 rises in the United States-is it a global threat? *Nature.* 2023;613(7943):222–3.

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