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Perspective

Stealth omicron-A new substrain in an ongoing pandemic of COVID-19

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The dawn of 2022 has put up a new challenge in the already ongoing pandemic of coronavirus disease 2019 (COVID-19). The pandemic that started in China and has spared no country has led to large-scale morbidity and mortality.¹ The major factor for such a long-lasting pandemic could be the rapidly mutating virus strain.² The latest mutated sub-strain that has been in the news recently is the BA.2 strain of the Omicron.³ The Omicron variant, which is also referred to as B.1.1.529, has three main substrains, BA.1, BA.2, and BA.3.⁴

This new substrain of Omicron is commonly known as the 'stealth omicron'.⁵ This new variant is a 'virus of concern' and it is essential to know the impact of this virus since in the initial stages this virus was difficult to detect due to missing mutations in the spike protein which the investigations like Polymerase Chain Reaction detect for establishing a diagnosis and thus it was difficult to distinguish between delta variant and the BA.2.⁵ Also, the Danish research claims that the BA.2 has a growth advantage over the other circulating strains of the Omicron and is 1.5 times more transmissible than the highly transmissible original Omicron strain.⁵ The Omicron subvariants share 39 mutations (mainly in the Spike protein); however, there are 20, 27, and 13 additional mutations in BA.1, BA.2, and BA.3 respectively.⁵ Also, BA.1, BA.2, and BA.3 contain 13, 10, and 1 unique mutation, respectively.⁵ BA.2 is the variant of Omicron

and was first detected in November 2021 in South Africa.³ Due to its high transmissibility, this new variant could well be the reason for the fourth wave of COVID-19.⁶ The disease caused by this strain has already resulted in large-scale hospitalizations in the countries of Europe like Denmark, the Philippines, Nepal, Qatar, Hong Kong, and China.⁷ Although considered a new mutated version of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), this strain has affected the populations globally in a different manner. As stated by the WHO, the stealth omicron is the dominant strain worldwide.⁸ However, the impact on different populations of different geographies of the world is not the same. In one place there are mass-scale hospitalizations, especially in some countries in Europe and Asia, but at the same time, there is negligible impact on certain countries like India. This new strain has led to the lockdown in a few cities in China.⁹ The cases due to new variant are almost a quarter of all the newly reported cases in the US and are doubling every week.⁷

The BA. 2 variant unlike its previous versions does not affect the lungs as in the early research it is known to primarily affect the upper airway.⁷ The symptoms vary from dizziness to extreme fatigue.⁷ Other symptoms may also include fever, coughing, sore throat, sore hand, headache, muscular fatigue and/or dystrophy, cold, and elevated heart rate.⁷

The third wave of COVID-19 caused by the delta variant of SARS-CoV-2 has already devastated highly populated countries like India. There is no clear evidence as to why the

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impact of the new variant of SARS-CoV-2 has not caused the impact like the delta variant in countries like India. But there are certain important things which could have been the reason. Serosurveillance in September 2020 in India when the vaccination was very low showed antibodies against COVID-19 in 67.6% of the Indian population which could mainly be due to a previous infection.¹⁰ Again, the main reason could be the world's largest vaccination program that India has undertaken where they have vaccinated around 1,84,66,86,260 individuals till April 3, 2022.¹¹ Not only the two doses of vaccine but the national policy of booster doses in the name of 'precaution dose' to the at-risk population could be the main contributor.¹² Also, the major population of India (median age of 28 years) is young as compared to the European population or Chinese population thus the younger people are compatible to fight the new variant better as compared to the older populations. Also, the younger individuals have mild infections and are often asymptomatic thus such cases are less/not reported. Another reason could well be the efficiency of indigenously developed COVID-19 vaccines in India, which are far superior to the Chinese vaccines.¹³ In Hong Kong, due to the low surge of COVID-19 in the past, there was no herd immunity and the majority of the population is elderly and mostly not vaccinated.¹³ Those who have been vaccinated are from the low-efficient Chinese anti-COVID-19 vaccines.¹³ The proactive efforts of the national government which has learned a lot from the devastation in the third wave of COVID-19 in India are also an important contributor. The prompt decisions on public health leading to policymaking and implementation at the grassroots are also worth a mention. The relaxed attitude of the general public towards COVID-19 where there were fewer COVID-19 restrictions added up by the reduction in COVID-19 appropriate behavior in countries of Europe could also have resulted in the rapid flaring-up of this BA.2 variant which is highly infectious.¹⁴ The role of booster shots of the COVID-19 vaccines is important as studies have shown that the immunity of the vaccines diminishes with time and booster shots could add up to 40% of the efficiency of the vaccine after one month and could reduce the hospitalizations to nearly 90%.¹³ As per the WHO, the immunity developed against the previous variant of BA.1 is effective against BA.2.¹³ And it is well known that COVID-19 is less severe in immunized individuals.

In short, the new variant of SARS-CoV-2 i.e., BA.2 is highly transmissible and has the potential to cause the fourth wave of COVID-19. However, rapid mass-scale vaccination, observing COVID-19 appropriate behavior, and prompt policymaking backed with research and development could protect the world from the devastation which has been seen in the previous waves of COVID-19.

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Conflict of Interest

None.

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