

World Health Organization declares B.1.617, first identified in India, the fourth variant of concern

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11 May 2021

At their Monday COVID-19 press brief, the World Health Organization (WHO) declared the highly contagious variant first identified in India, classified as B.1.617, as a variant of concern, meaning that it is now considered a global health threat. Dr. Maria Van Kerkhove, the technical lead for the COVID-19 pandemic, explained, “In our consultation with our virus evolution working group, our epidemiology teams, and our lab teams internally, there is some available information to suggest increased transmissibility of B.1.617.”

She added that this variant could also reduce neutralization from antibodies, implying it has the ability to evade immunity to some degree, one of the key reasons it was classified as a variant of concern. The designation is used for those mutations that have been demonstrated to be more contagious, deadly or resistant to the COVID-19 vaccines currently being employed.

Along with the B.1.1.7 (UK variant), B.1.351 (South African variant), and P.1 (Brazil variant), this makes B.1.617 the fourth strain of the SARS-CoV-2 virus to have undergone a mutation toward a more virulent and transmissible form, arising independently under the pressures of mass infections, brought on by the criminal policy of herd immunity that threatens to make the coronavirus endemic.

The B.1.617 variant that is behind the massive surge across India and neighboring countries such as Nepal has three sub-lineages. The B.1.617.3 was first detected in Maharashtra, India, on October 5, 2020, but has remained the uncommon form compared to the two sub-lineages B.1.617.1 and B.1.617.2, first seen in December.

The average daily COVID-19 case count in India is approaching 400,000, and the official daily death toll, a vast underestimation, is close to 4,000. The current official tally for India has tallied over 23 million COVID-19 cases and more than a quarter-million deaths. More recent estimates place that figure over 1 million.

In recent animal models, the B.1.617.1 variant showed a higher viral load and pathogenicity than the B.1 variant. The early evidence suggests that the B.1.617 is more transmissible and immune evading compared to the B.1.1.7 and B.1.618 mutants. In West Bengal, a state in eastern India, between the Himalayas and the Bay of Bengal, where B.1.618, which contains the E484K mutation, was dominant, it has been supplanted by the B.1.617 lineage. Additionally, the B.1.617 has spread to 40 other nations, including the United Kingdom, the US and Canada.

Dr. Sujeet Singh, director of the National Center for Disease Prevention and Control, based out of New Delhi, speaking at a press conference on May 5, said, “In some states, the surge can be tied to B.1.617.”

Virologist Dr. Shahid Jameel of Ashoka University in Sonapat, and chair of the scientific advisory group of the Indian SARS-CoV-2 Genome Sequencing Consortia (INSACOG), added, “Its prevalence has increased over other variants in much of India, suggesting that it has better ‘fitness’ over those [other] variants.” Initially, in October, INSACOG had only detected a few such cases. By mid-February, the B.1.617 accounted for 60 percent of all SARS-CoV-2 cases detected in Maharashtra.

The timing of the emergence of the B.1.617 strain coincided with Indian Prime Minister Narendra Modi’s assertion that the policies of the ruling Bharatiya Janata Party had beaten the virus. He then allowed tens of thousands to attend cricket matches in March and welcomed millions of devout Hindu pilgrims to the Kumbh Mela festival along the Ganges River, which may become the largest super-spreading event of the pandemic.

The B.1.617 lineage possesses 13 to 17 mutations, three of which are in the virus’ spike protein. The E484Q mutation appears to confer the virus increased binding capacity to the human ACE2 receptor and better ability to evade the immune system compared to other variants. The L452R mutation provides a similar enhancement of functions as the

E484Q. The third mutation, P681R, may increase the infectivity of the virus particles by facilitating the splicing of a unique precursor protein into its active infective conformation, a microscopic ignition key.

Limited in-vitro studies conducted on human lung and intestinal cells in Germany by Dr. Stefan Pöhlmann and colleagues suggest that the new variant of concern is moderately better at entering these cells than previous strains.

They also collected serum from 15 previously infected individuals and found their neutralizing antibodies were about 50 percent less effective against B.1.617 than previous strains. When they obtained serum from people fully inoculated with Pfizer's COVID-19 vaccine, these antibodies were 67 percent less potent.

Dr. Ravindra K. Gupta and colleagues working at the INSACOG found that neutralizing antibodies obtained from a handful of vaccinated individuals were 80 percent less potent against these mutations. The researchers from INSACOG noted that some health care workers in Delhi who had received the Indian version of the AstraZeneca vaccine, known as Covishield, had been reinfected, in most cases with the B.1617 variant. Dr. Gupta cautioned, however, that this does not imply that the vaccines are ineffective against preventing severe disease or hospitalizations.

There is an urgent need for population-based studies that can address these questions in a real-world setting. However, these developments further drive the critical point that comprehensive public health measures are ever more necessary. But as the high-income countries have begun to see a significant number of their populations vaccinated or infected, the drive to pry reopen the global economy has accelerated. Meanwhile, the pandemic has spread to more impoverished regions that had somewhat escaped the clutches of the virus in the first year.

As the Director-General of the WHO, Dr. Tedros Adhanom Ghebreyesus, said on Monday, "Globally, we're still in a perilous situation. The spread of variants, increased social mixing, the relaxation of public health measures, and inequitable vaccination are all driving transmission. Yes, vaccines are reducing severe disease and death in countries that are fortunate enough to have them in sufficient quantities, and early results suggest that vaccines might also drive down transmission."

He added, "But the shocking global disparity in access to vaccines remains one of the biggest risks to ending the pandemic." With 1.32 billion doses administered worldwide, equating to 17 doses for every 100 people, the differences by income are blatantly stark and revealing. North America has seen 52 doses administered per 100 people. Europe has

climbed to 35 doses per 100. Meanwhile, South America with 20, Asia with 14, Oceania with seven, and Africa with 1.5 doses per 100, highlighting the inequity that characterizes capitalist relations among nation-states.

Because of the ban on exporting vaccine supplies, last week was the first time the US delivered Pfizer's COVID-19 vaccine to another country, in this case 10 million doses to Mexico, after the Trump administration's restrictions on dose exports expired at the end of March, according to WebMD. The Biden administration had also announced it would finally send 60 million doses of unused AstraZeneca COVID-19 vaccines to other countries. Up to now, the bulk of vaccine exports have come from China, India and the EU.

Posing an essential question, journalist Michael Butokiev from CNN Opinion asked the WHO panel, "I was wondering if you might advocate a code of behavior for countries engaging in vaccine diplomacy because I think a lot of countries that are poor, and Dr. Tedros mentioned the poorer countries are not getting enough vaccines, I think are getting in situations which they might regret later on."

Dr. Mariangela Simao, Assistant Director-General for Access to Medicines and Health Products, responded, "in terms of the COVAX facility being an equitable access mechanism that we are very much working on and striving to get enough doses to be distributed. I would say we also need a change in the... It's not necessarily the code of behavior, but I think we are seeing also we are living in a world where many of the producers are moving towards a profit-driven approach instead of an equitable access approach."

Dr. Tedros then supplemented these remarks, stating, "In international relations, there are three ways of engagement. ... One is cooperation, the second is competition, and the third is confrontation or conflict. To end this pandemic, the only choice we have is cooperation. Vaccine diplomacy is not cooperation. It's actually a geopolitical maneuvering. I don't think this is really something that many don't understand; everybody understands it, but from WHO's side, we have been saying, we cannot defeat this pandemic through competition. We can't. If you compete for resources for geopolitical advantage, then the virus gets the advantage."



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