

Tracing the origin and nature of COVID-19 Delta variant

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Dear Editor,

The novel coronavirus disease has created havoc in the life of the general population. As of now, there are multiple SARS-CoV-2 virus variants enlisted in the Variant of Concern (VOC) and Variant of Interest (VOI) list which are spreading worldwide. One of these variant is detected in India in October 2020 which was further named as the B.1.617 lineage. The Delta variant, Lineage B.1.617.2, is considered to be more transmissible than contemporary lineages. Further, WHO named it the Delta variant on 31 May 2021, and on 11 May 2021, the WHO also classified this lineage as VOC. It was accounted that Public Health England (PHE) changed their order of classification of B.1.617.2 from Variant Under Investigation (VUI) to VOC dependent on an appraisal of contagiousness being essentially identical to B.1.1.7 on May 7, 2021.¹ The variation is believed to be mostly liable for India's second influx of pandemics starting in February 2021 and it later added to a third wave in the United Kingdom and South Africa. Moreover, in July 2021 according to WHO warning it was reported that it could have a comparable impact in Europe and Africa.^{2,3} Till now 13 mutations of the Delta/B.1.617.2 have been reported. Some of them are; Substitution of aspartate by glycine at position 614 causes D614G mutation on spike protein code which may responsible for high transmissibility and the substitution of leucine- by arginine at position 452 causes L452R mutation which presents a more affinity of the spike protein for the ACE2 receptor.⁴ P681R mutation is the substitution of proline by arginine at position 681 which might increase cell level infectivity by working with cleavage of the S-precursor protein to the dynamic S1/S2 arrangement.⁵

Now, fair admittance to protected and powerful vaccines is a basic need to control the COVID-19 pandemic, so it is tremendously promising to see such countless vaccines demonstrating and going into advancement. At present, there are 22 vaccines which are enlisted in the data of the status

of different COVID-19 vaccines provided by WHO. The COVID-19 vaccines that are presently in development phase or have been approved are relied upon to give basically some insurance against new variants on the grounds that these vaccines get broad-spectrum effectiveness including the scope of antibodies and cells.⁶ Consequently, mutations in the virus ought not to make vaccines totally ineffectual. Thus, in response to the delta variant, it has been reported that the Pfizer vaccine is more effective (87.9%) as compared to AstraZeneca's vaccine (59.8%) against symptomatic disease.⁷ Pfizer-BioNtech suggests that the booster shot, the third dose will provide a high degree of protection against COVID-19 VOC. Johnson and Johnson, which advertises a solitary shot vaccine, said its vaccine is a more significant level of counter-acting agent action against and 60% effective against the delta variant. It has been observed that the Sputnik-V vaccine is 90% effective against the delta variant. These all data provide a sigh of relief against this contagious delta variant.⁸ But being vaccinated doesn't imply that we can pull out all the stops and put ourselves as well as other people in danger, especially in light of the fact that exploration is as yet progressing into how much vaccines secure against sickness as well as against contamination and transmission.

END NOTE

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