



Letter to the Editor

COVID-19 mutation in the United Kingdom

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Dear Editor

On the 23rd of December 2020, the United Kingdom discovered a new mutation strain from SARS-CoV-2 known as VUI-202012/01 [1]. The viruses seem to be mutated all the time and their behavior and properties were changed relating to a lot of uncertainties including the effects of environmental and human-to-human interaction. What did we concern about this variant? That was the speed of its virus transmission for humans.

Based on a case confirmed in Northern Ireland that the rate of transmissible for this variant was higher than 70%. According to the modeling studied by Prime Minister Boris Johnson, the ability to spread its virus could increase to 0.4 probability but there was no evidence to prove the new mutation strain would cause a higher mortality rate.

Rambaut et al. reported that a novel set of spike mutation strains in SARS-CoV-2 regarding the B.1.1.7 lineage accounts for an increasing proportion of cases in the United Kingdom. They identified the N501Y gene mutation within the receptor-binding domain (RBD). The spike deletion 69-70 del increased the binding affinity of angiotensin-converting enzyme 2 (ACE2) and changed the receptor-binding domain (RBD) associated with the human immune system [2]. Would the vaccine still suitable for its mutation strain?

Up to the present, there is no reason to support the effectiveness of a COVID-19 vaccination would be influenced after mutation, such as SARS-CoV-2 increase its virulence or cross change in the spike protein. Vaccine function is to initiate an immune system. It produces antibodies for combating the SARS-CoV-2. This prevents the spike proteins interaction with an angiotensin-converting enzyme 2 (ACE2) specific receptor on the alveolar cell surface in the lung [3].

How does the United Kingdom stop the spread of SARS-CoV-2 and its mutation? SARS-CoV-2 spread by self-replicating within a host organism and mutates after the attack on the human immune system to get an evolution. If no replication of the virus so no mutation. Public and personal health are the most important things to contain the pandemic including keeping a social distance, wearing a face mask, washing hands frequently, and ban group gathering. The

Government of the United Kingdom has implemented six key health protection regulations such as back from another country (international travel), stay at home, wearing of face coverings in a relevant place, collection of people infected or closed contact people details, self-isolation, and local authority enforcement powers to reduce the transmission and spread of SARS-CoV-2 [4]. Certainly, vaccine development and its vaccination, is the best way for the COVID-19 pandemic situation.

Author contributions

All authors contributed to the concept, acquisition and analysis of data, drafting of the manuscript, and critical revision of the manuscript for important intellectual content. All authors had full access to the data, contributed to the study, approved the final version for publication, and take responsibility for its accuracy and integrity.

Conflicts of interest

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