Severity assessment of single-dose oxford-astra zeneca vaccinated individuals infected with SARS CoV-2 in Southeast Bangladesh

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Abstract

Coronavirus disease (COVID-19) vaccination campaign is underway in several parts of the planet including Bangladesh but till to this point there's no available health data revealed among the vaccinated people. We conducted a cross-sectional study to assess the health status of 1st dose Oxford-AstraZeneca vaccinated individuals infected with SARS CoV-2. Standard virological method real-time reverse transcriptase-polymerase chain reaction (RT-qPCR) was performed to detect SARS-CoV-2 and different health parameters from vaccinated individuals were collected using pre-structured questionnaires during infection period. A total of 6146 suspected samples were tested and 1752 were found positive for SARS-CoV-2, of them 200 individuals were identified who received 1st dose of COVID-19 vaccine. Among the vaccinated individuals, 165 (82.5%) patients were not hospitalized and 177 (88.5%) did not show any respiratory difficulties. Only 8% of patients required extra oxygen support and 199 (99.5%) individuals didn't desiderate any intensive care unit (ICU) interference. Overall, oxygen saturation was recorded around 96.8% and respiratory difficulties did not extend more than 5 days during the infection period. Within the vaccinated COVID-19 positive individuals 113 (56.5%) and 111(55.5%) persons have normal physiological taste and smell. Surprisingly, 129 (64.5%) individuals carrying different comorbidity where high blood pressure 36 (27.9%) and diabetes 32 (24.8%) were found more prevalent. However, the significant finding of the present study was 199 (99.5%) vaccinated individuals survived with good health conditions and became negative with subsequent RT-qPCR test. The results of this study expound that administration of 1st dose Oxford-AstraZeneca vaccine significantly reduces health risks during the COVID-19 infection period.

Biography

DR. Md. Sirazul Islam is a veterinarian, currently working as a Molecular Biologist in the COVID-19 Detection Laboratory, CVASU, Bangladesh. He has published 2 article as a first author and 4 articles as co-authors. His expertise and research interests lie in the realm of infectious diseases, especially emerging and reemerging pathogens in tropical environments, genomics, and bioinformatics. DR. Islam did his graduation in Veterinary Medicine (DVM) from Chittagong Veterinary & Animal Sciences University in Bangladesh in 2018 and studied post-graduation (MS) in Pathology from the same institute. He has an affiliation with various bodies, including the American Society for Microbiology (ASM), One Health Bangladesh, Hubnet (One Health South Asian Network) etc.