5th International conference on
Vaccines, Vaccination and Immunization
August 21-22, 2024 | webinar
Volume : 15

The root causes and the causal analysis of the global COVID-19 pandemic from epidemiological/population vaccination perspectives

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The impact of the COVID-19 pandemic has been profound over the last three years, resulting in millions of deaths and widespread disruptions across continents. While new coronavirus strains have significantly contributed to the severity of the pandemic, there are notable variations in outcomes from population immunity and an epidemiological perspective across different regions that are not fully explained. Root cause analysis has been applied to illustrate significant age population differences in mortality and the varying age cutoffs depending on a country's region. Why some people exhibit certain immunity while others show vulnerability remains a question. Elsewhere, it has been demonstrated that the COVID-19 RNA virus and the Polio Virus share a similarity in the 3-dimensional structure of RNA Dependent RNA Polymerase (RdRP). Lab testing showed that the RdRP-induced immune response cross-reacts to protect against each other, significantly influencing the pandemic pattern. In common understanding, oral vaccination produces longer and stronger immunity due to the participation of massive lympho-systems with better memory and affirmative immunoglobin (IgA). Observation: a.) The pandemic swiftly swept through EU and North America, affecting aging populations (mean age ≥ 40s). These countries, predominantly using Inactivated Polio Vaccine (IPV) for the past 3–4 decades, experienced mortality onset around 18 years of age. b.) In other developing countries using Oral Polio Vaccine (OPV) (mean age ≤ 30s), the pandemic spread gradually with a delayed onset of aging mortality. This results from longer and cross-stronger immunity to the RdRP against COVID-19 infections. In conclusion, global-wide imbalanced immunity cultivated the potency of the Corona virus COVID-19, specifically affecting the aging population lacking immunity to the RdRP of COVID-19. The unique global pandemic pattern, influenced by Polio vaccination programs (IPV/OPV), exhibits differences in the onset age of mortality, fitting the established model by Polio vaccination. Suggestively, to restore immunity balance, applying a targeted RdRp-based vaccine to vulnerable clusters can control COVID-19 virus replication and bring the infection and epidemic under control.

Biography

Qiyi Xie has his expertise in communicable disease prevention and control with over four decades of experience in the fields of public health, infectious disease epidemic control, and vaccine development, he has played a pivotal role in advancing our understanding of various health challenges. His expertise influence on national public health policy and immunization is evident with senior booster immunization against tetanus in the USA and other immunization programs in China. He served as the CEO/President of Vaccine Pharma-Biological firm, leading a dedicated team of scientists in conducting extensive research related to COVID-19 and other disease and vaccines such as Dengue Fever. The comprehensive explanation of the rationale and reasons behind the pandemic enabled his team to develop an effective RdRP based COVID-19 vaccine of which has been granted the marketability certification from the Mexico Ministry of Health (COFIPRIS) against COVID-19.

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Abstract received : December 31, 2023 | Abstract accepted : January 02, 2024 | Abstract published : 06-09-2024