COVID-19: A Non-Living Particle Which Could Reshape Human Life

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This issue comes in very critical time where many countries are in either full or partial lockdown due to the emergence of the new pandemic viral infection caused by the most googled word “COVID-19”. This novel virus belongs to the corona virus family (Coronoviridae), and designated as 2019-nCoV. This virus was first reported in central China city “Wuhan” at late November 2019. However, the number of cases outside China increased 13 folds by 11 March 2020 in only two weeks’ time. This make the WHO Chief Dr. Tedros Adhanom Ghebreyesus to declare it as pandemic disease.\textsuperscript{1} As of 15 June 2020 (the time of writing this editorial), more than 8 Million cases and 436 Thousands deaths have been reported in 215 countries.\textsuperscript{2}

This virus belongs to the family of viruses which cause different symptoms like fever, headache, breath difficulty, pneumonia like other lower respiratory tract infection.\textsuperscript{3} However, this is considered the third and the most lethal coronavirus outbreak after the Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV) in 2002-2003 and the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) in 2012.\textsuperscript{4-6} However, the number of cases and mortality of the two previous outbreaks of SARS-CoV and MERS-CoV were much less than the current pandemic outbreak caused by COVID-19 which put global health system on high alert.

The Ease of Move from Epidemic to Pandemic

Nowadays, the world is considered as big village with ease of transport of people and goods. Therefore, the time required for any strong pathogenic diseases to move from epidemic to pandemic become very short. The short global
spreading time taken by COVID-19 was also

 driven by the little information available about the

 mode of transmission of the this new virus from

 animal to human and from human to human, and

 the identification of the risk group. In addition,

 at the beginning of the outbreak of this virus,

 high temperature was the only main symptom

 for diagnosing the COVID-19 carriers in the

 crowd. Later on, this was not considered as strong

 indicating measure as some many positive cases

 were symptomless. Therefore, many countries

 used quarantine strategy for 14 days to make the

 positive cases more obvious during this (proposed)

 incubation period of the virus. Later on, the 14

days quarantine was reported as not enough as

 some cases showed symptoms after longer time.

 However, like many other pathogens, the severity

 of COVID-19 symptoms is highly dependent on

 host immunity, virulence, the viral load, and even

 more recently the blood group. These all together

 caused some delay in putting proper regulations

 and guidelines as preventive actions to control

 borders. Therefore, the large number of movement

 of people from China to outside (before the

 declaration of COVID-19 as pandemic disease)

 beside our little understanding about the mode

 of transmission and symptoms of this virus caused

 rapid distribution of the disease worldwide.

 The Impact of COVID-19 on Health System

 and Beyond

 The impact of Covid-19 will be not

 limited to the health system and how the health

 system in each country or region can tolerate

 the rapid increase in cases but the economic

 and social impact are of high concerns as well.

 The direct impact was the interruption of global

 trade and supply chain which lead to recession

 and asset price depreciation. After only four

 months of COVID-19 outbreak, the second

 challenge become food security. Even though,

 in all lockdown countries the food supply chain

 was waived from any shutdown or movement

 restrictions, However, the food supply chain have

 been heavily affected in some regions due to

 the shortage of the local supply (due to the less

 movement of labor and the shutdown of indirect

 supporting industries). In addition, many countries

 stop exporting food to secure enough reserve

 for local consumption market during this crisis.

 Education was also affected and many education

 institutions in all levels (schools, universities,

 academy, etc…) move to on-line classes to

 overcome the movement control act. However,

 the negative impact of COVID-19 was less in

 more automated industries which not highly

 dependent on manpower in some part in the

 world. This showed the importance of

 automation and Industry 4.0 in industrial sectors.

 On the other hand, industries which dependent

 on people movement such as aviation and

 tourism were almost in shutdown. In fact, the

 real negative impact of COVID-19 on the global

 economy cannot be estimated for the time being.

 However, the severity of this negative impact

 will be in parallel to the increase of cases with

 the absence of any potential efficient drugs or

 vaccines.

 The Role of ICT to Reduce the Impact of

 COVID-19

 No one can imagine how could be

 the negative impact of COVID-19 on human

 life if internet and supportive Information and

 Communication Technology (ICT) system were

 not exist. The current internet platform facilitated

 the fast transfer of information around the world

 which supported the healthcare sector worldwide

 by increasing the global public awareness of

 the disease (transmission, symptoms, health

 precautions, data of potential treatment protocols,

 etc…). In addition, the availability of information/

 news which updates health instructions in seconds

 after release facilitated to decrease the cases

 dramatically. A universal worldwide on-time

 validated information system which can provide

 the number of cases (active, recovered, dead, serious/critical, cases per million population, and

 total test run in each country) around the globe

 become available with full statistics. This assisted

 the decision makers for proper and fast actions to

 design dynamic risk mitigation system in fighting

 against COVID-19. In addition, beyond the health

 sector, many businesses and education institutions

 were able to run most of meetings and classes

 using on-line platforms (Google meet, Skype,

 Whatsapp, Zoom, Webex, etc…) to overcome in

 part the negative impact of lockdown around

 the globe. E-commerce was also important to

 implement the movement control order and to ease

 the delivery of the daily essential needs of peoples

 while keep staying at home. These all together

 helped in disease control by keeping physical

 distance needed to decrease the spread of the disease with
minimal impact on socio-educational-economical activities.

The Life After COVID-19

The big question is now, will life after corona be the same like before? I think in short- and mid-terms the answer is no but we hope life will be back to normal thereafter. However, the only thing I am sure about is that our life after COVID-19 will be not exactly like before. Therefore, more research is needed in different fields (Medical, Agriculture and food, Economy, Sociology, Logistics, Transportation, Tourism, and many other research areas) about the impact of COVID-19 on our life in omic/holistic approach. Understanding the impact of pandemic disease on our daily life will create a new niche areas of research to help us not only to minimize the negative impact of COVID-19 but to design a pro-active novel solutions which will shape our life after COVID-19. To achieve this target, new integrations between two or more research fields such as (Socio-Agro-Economy, Biomedical-Informatics, Microbial-Immuno-Dynamics, Medical-Aerodynamic, etc…) are needed. This will not only help in case of the current crises, but it will act as pro-active dynamic science based technological platforms to provide fast, and efficient solutions in case of any future crisis.

Last but not least, if we look in human history, COVID-19 war will be for sure not the last between Human and Microbes. We have to be always alerted and ready to win with minimal efforts and with minimal losses as much as possible. This need more full cooperation between all nations with high transparency in exchange of knowledge and information. We live in one world, we face the same challenges, and global problems need global strong efforts to come up with proper and effective solutions. In the current borderless world, people should realize that when we face pandemic disease no one will be safe if other people on this earth are not safe as well. I would like to end this article by: The first who can predict life after COVID-19, will be the one who will lead.

REFERENCES