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COVID-19: A Socio Medical Challenge

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Editorial

It is now more than a year, 221 countries in the world are fighting against a tiny virus, popularly known as Coronavirus. Though the outbreak was first reported from Wuhan, a city in Hubei Province, China in December 2019 [1], from where SARS-CoV-2 was first isolated from the airway epithelial cells of patients with viral pneumonia [2]. The virus reached to the most part of the world before the World Health Organization (WHO) named the disease as COVID-19 on February 11th, 2020 caused by novel Coronavirus (2019- nCoV) and declared this a global pandemic on March 11th, 2020. Previously, there were two outbreaks of severe coronavirus, namely Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV) and the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) [3]. According to the latest data till date 125,566,907 coronavirus cases have been detected worldwide with 259,140 deaths [4]. There were many worldwide pandemic so far, each of which took the toll of more than a million people, such as the third cholera pandemic, 1846 to 1860; Flu pandemic of 1889 to 1890; Spanish flu of 1918 to 1920; the third Plague pandemic of 1955 to 1960; Asian flu, 1957 to 1958; Hong-Kong flu of 1968 to 1969; HIV and AIDS from 1981 etc. But the world has never experienced such challenges which we all have faced during these last sixteen months.

Compared with known corona viruses that can infect humans, the SARS-CoV-2 structure has certain differences, so it is defined as the seventh coronavirus [5]. SARS-CoV-2 belongs to the order *Nidovirales*, *Coronaviridae* [6]. This virus is highly mutant in character and very frequently changes its feature. Current Coronavirus seems to be temperature resistant too. By proving many predictions wrong coronavirus surviving both at sub-zero temperature as well as at temperature as high as 47°C to 48°C. Because of this some of the scientists, especially virologists claimed that this is not a natural but an artificial virus.

For the first time in history the world has seen that the crisis brought together physicians, scientists, administrators, political decision makers. Worldwide people experienced country-wide lockdown, use of face masks and maintaining a physical as well as social distance as a unique feature of this current pandemic. For the first time the scientists from all over the world not only engaged themselves in thousands of scientific research works related to corona virus and COVID-19 and also successfully developed anti-COVID-19 vaccine within a span of one year instead of many obstacles and challenges to vaccine research and development, including the lack of knowledge about virus transmission, pathogenesis, and immune response, absence of the most appropriate animal models [4].

We have found it is more challenging to fight against COVID-19 because SARS-CoV-2 is different from SARS-CoV and MERS-CoV in terms of biological features and transmissibility [3]. There are many difficulties in the development of coronavirus drugs; firstly, coronaviruses are RNA viruses with variability, and this is the reason why new types of coronaviruses with novel structures easily appear. The drugs used in the past may not be effective for this new type of coronavirus or have only weak effects. Secondly, many drugs are prone to have severe side effects like hemolytic anemia, neutropenia, cardiopulmonary, etc. [7]. In addition, virus research is highly risky, and general experimental conditions are difficult to meet bio-safety requirements, so screening techniques, animal models, and suitable animal experimental platforms are limited [3]. The world still faces great challenges in control of the pandemic such as unclear origin and source of infection, unprecedented and unanticipated spread of the disease, wide distribution of infected populations, complexity of the route of transmission, high level of contagiousness, faster spreading nature of the virus, lack of knowledge regarding diagnosis and management of infected populations, as high as 85 percent infected persons are asymptomatic, huge susceptible population world-wide, frequent mutation of the virus, uncertain about availability of vaccines etc. We have also experienced a novel feature of this pandemic that in most of the countries strategies to control the potential pandemic and prevent its further spread we are more dependent on the political or administrative nature of

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action rather than public health measure. Most of the containment related decisions are being made by the politicians, administration or other law enforcement officials. At the same time we have also seen that most of the international leaders came forward to prevent the potential pandemic by supporting preparedness and vaccination especially in low and middle income countries by mobilizing global resources to equip health facilities by providing protective tools, case management related equipments and promoting research in this field.

What we learnt from this pandemic is that the international community must develop strong solidarity in the joint efforts of fighting against this dreaded disease through better international cooperation and coordination. The International Health Regulation (IHR) of World Health Organization (WHO) (2005), the century old epidemic acts of certain countries need to be strengthened further. The pandemic is not over yet, but it has provided us an opportunity to introspect and learn to make an amicable decision in crisis. It is also a lesson for the scientists and public health professionals that their lack of knowledge and initiatives once again given an opportunity to the bureaucrats to prove their upper hand over technocrats.

References

1. Zhu H, Wei L, Niu P. The novel coronavirus outbreak in Wuhan, China. Glob Health Res Policy. 2020;5:6.
2. Yang X, Yu Y, Xu J, Shu H, Xia J, Liu H, et al. Clinical course and outcomes of critically ill patients with SARS-CoV-2 pneumonia in Wuhan, China: A single-centered, retrospective, observational study. Lancet Respir Med. 2020;8(5):475-81.
3. Han YJ, Ren ZG, Li XX, Yan JL, Ma CY, Wu DD, et al. Advances and challenges in the prevention and treatment of COVID-19. Int J Med Sci. 2020;17(12):1803-10.
4. Coronavirus Updates.
5. Zhu N, Zhang D, Wang W, Li X, Yang B, Song J, et al. A novel coronavirus from patients with pneumonia in china, 2019. N Engl J Med. 2020;382(8):727-33.
6. Liu J, Zheng X, Tong Q, Li W, Wang B, Sutter K, et al. Overlapping and discrete aspects of the pathology and pathogenesis of the emerging human pathogenic coronaviruses SARS-CoV, MERS-CoV, and 2019-nCoV. J Med Virol. 2020;92(5):491-94.
7. Muller MP, Dresser L, Raboud J, MCGeer A, Rea E, Richardson SE, et al. Adverse events associated with high-dose ribavirin: Evidence from the Toronto outbreak of severe acute respiratory syndrome. Pharmacotherapy. 2007;27(4):494-503.