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COVID-19 third wave: a challenge for overburdened and underdeveloped healthcare system of Pakistan

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To the Editor,

Countries around the globe have observed the dynamic pattern of COVID-19 associated morbidity and mortality in which the first wave was observed in spring 2020 that considerably moderated during the summer. The second wave emerged in fall 2020, which subsequently decreased in early 2021. But now COVID-19 third wave is on the line with an inclined rate and is considered more infectious in some of the countries [1]. In Pakistan, COVID-19 has caused 630,471 confirmed cases with about 13,863 deaths by 21 March 2021 as shown in Figure (a). The rate of positive cases was highest (23%) in June 2020, which dropped to 1.7% by September 2020. Later, it began to rise, reaching 7.45% in January 2021 and 3% in February 2021. Now it is on the rise again and already reached 8% by 19 March 2021 Figure (b). According to the National Command and Operating Center (NCOC) of Pakistan, COVID-19 cases rose to 22,018 in the last 10 days, which is a 68% increase in the cases from the proceeding 10 days, as shown in Figure c.

We have read the article by Turk et al. (2021) that describes the effective ways to manage COVID-19 including the incorporation of viral RNA into the human genome and shedding of SARS-COV-2 as a part of intestinal viriobiota may help in reducing the burden of COVID-19. According to them, Chimerisma-mediated immunotolerance between the virus and humans may be the only solution to a current pandemic. Nevertheless, vaccines manufactured by different companies using different strategies including RNA vaccines and classical approaches are in use in different parts of the world [2]. Other strategies like the development of antiviral agents such as receptor antagonists are also being investigated [3].

Pakistan is a low-middle-income country with a poor and weak healthcare system and infrastructure. Pakistan has the 5th largest population in the world, having 220 million people, and it is vulnerable to COVID-19 third wave. Pakistan's healthcare system covers both the private sector, which serves 70% of the Pakistani population to meet their health-related demand, and the public sector that serves only 30% of the population. In Pakistan, only 27% of people benefited from full treatment for health-related issues, while the remaining 63% population has limited or no coverage to even the primary healthcare system [4]. Pakistan is currently facing a shortage of about 200,000 doctors and 1,400,000 nurses for its whooping population, indicative of the poor infrastructure, overburdened and shabby healthcare system of Pakistan. Pakistan has only 1700 ventilator for critically ill patients of COVID-19 and by 16 March 2021 with the start of the third wave, the occupancy of a ventilator in big cities like Islamabad, Multan, Lahore, Bahawalpur, and Peshawar increased up to 46%, 30%, 35%, 27%, and 26% respectively which may exceed to its maximum limit with the rise in the third wave and patients will thus suffer from the dilapidated healthcare system of Pakistan.

Different countries applied various protective measures to limit the spread of COVID-19 and developed some mitigation approaches to reduce the burden to the healthcare system. Mass vaccination is widely being practiced in all countries of the world. The Pakistani government is also taking serious mitigating actions to control the overburden of COVID-19 and is proving the facilities like free COVID-19 testing, quarantine centers, and designated hospital to the public. However, Pakistan being the low-middle income and 5th most populated country in the world has been facing a lot of problems in effectively managing the COVID-19. The healthcare system of Pakistan is currently facing a scarcity of funding, ineffective operational coordination and management, lack of workforce (doctors, nurses, and other healthcare workers), constraints in personal protective equipment (PPEs), and shortage of medical equipment. Consequently, the overburden and shabby healthcare infrastructure of Pakistan can lead to a most widespread and exponential rise in the

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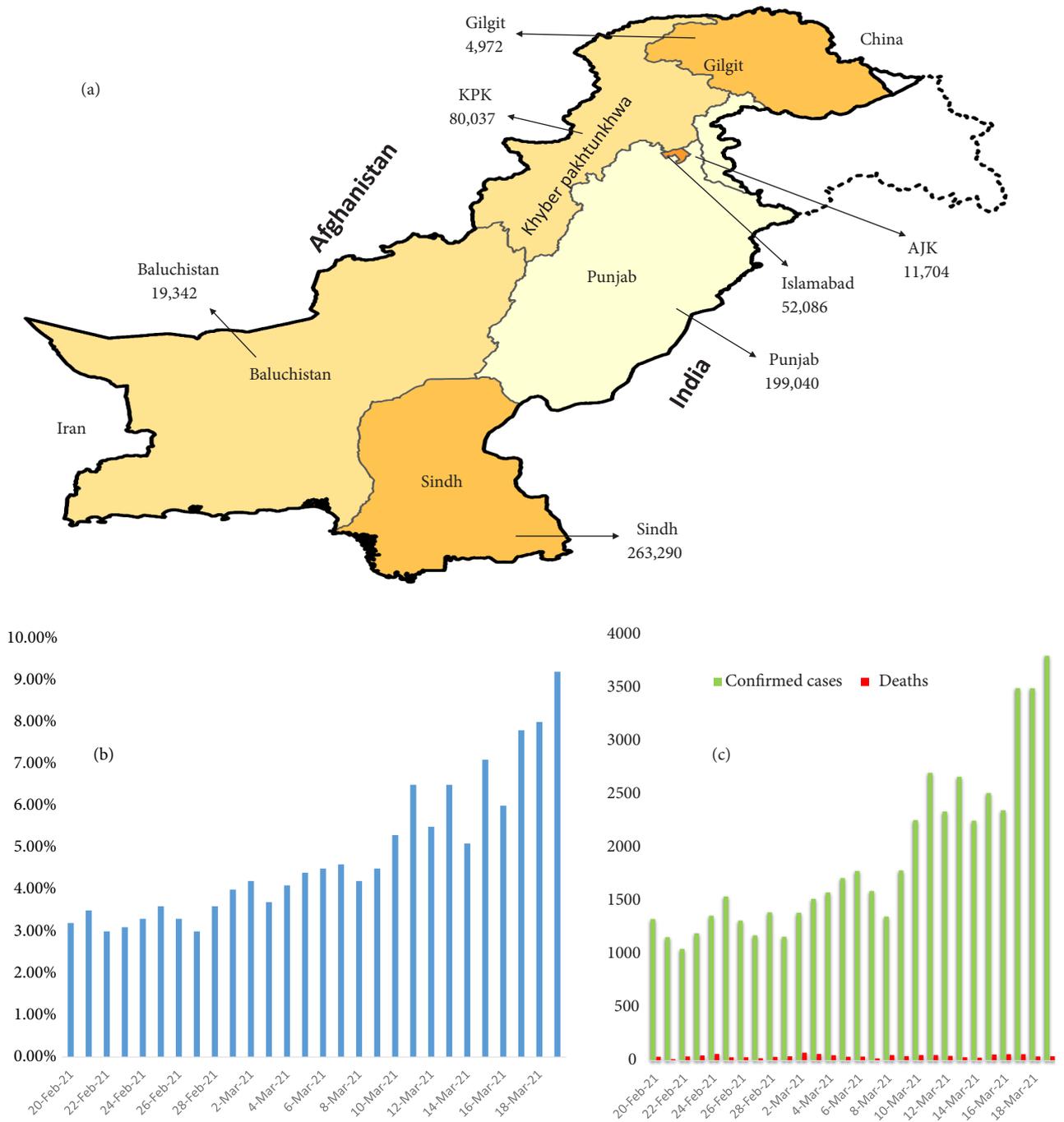


Figure. (a) Total number of COVID-19 cases across Pakistan since its outbreak, (b) Percentage of positive cases per day from 20 Feb 2021 to 18 March 2021, an indication of COVID-19’s third wave, (c) Recent trend in the confirmed positive cases and death across Pakistan.

cases of COVID-19 in the third wave. The mitigation measures as discussed by Güner et al. (2020), such as the administrative infrastructure, healthcare system, and infection control measures need to be enhanced with the immediate willingness of the government’s preparation to combat the COVID-19 in the early stages of its third

wave [5]. Pakistan and other countries having weak and overwhelmed healthcare infrastructure need to emphasize continuously stratified risk assessment, economic impact, and management of health crisis during the wave, and psychosocial effect through well-organized resource management. Proactive measures like the isolation,

quarantining, social distancing, partial or complete lockdown in the adversely affected areas, and vigilant checks on execution of standard operating procedure need to be addressed by the government. To prepare for and minimize the effect of the third COVID-19 wave, there should be temperature monitoring at public places, enhanced surveillance system, and healthcare institutions should be provided everything of their needs including isolation wards and intensive care units separately to treat the suspected and confirmed individuals. The effective

vaccination program in the country with an overburdened healthcare system should be prioritized to prevent from lethal effect of the third wave.

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Conflict of interest

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