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Letter to the Editor

Covid-19, Cholera and Crimean-Congo Hemorrhagic Fever in Iraq: A Country with Three Outbreaks

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To the editor.

The first cases of Covid-19 were reported in Iraq in February 2020. Since then, the country has passed through four devastating waves of Covid-19, with a death toll reached to 25000 deaths.[1,2] The already debilitated health system, which suffered from two wars, a long period of international sanction, and sectarian tension, could not handle the numerous COVID patients, particularly those who needed intensive care unit admissions.[3] After the fourth wave of the Omicron variant subsided, healthcare providers breathed a sigh of relief, thinking they would get a rest period. However, a hidden outbreak was lurking around the country. Between January 2022 and July 2022, the Iraq health authority reported 269 cases of Crimean-Congo Hemorrhagic fever.[4] During this period, 36 patients lost their lives, giving a case fatality of 36/269 (13.38%). Such an infection is caused by a tick-borne virus (Nairovirus) of the Bunyaviridae family. The infection is transmitted to humans by tick bite or through contact with infected blood,[5] with a reported case fatality of 10-40%.[5]

Additionally, worse came to worst when the Iraq health authority announced a cholera outbreak after 13 cases were confirmed across the country in June 2022. Cholera is an infectious disease caused by *Vibrio cholerae*. The infection occurs by ingesting contaminated water or food.[6] During the last outbreak, it was felt that the government was reluctant to confirm all cases. As a result, while thousands of patients with symptoms and signs of cholera visited hospitals, only 449 cases were confirmed with the infection, with 48 deaths among confirmed cases.[4]

The outbreaks in Iraq may exhaust the health system in the country with political and sectarian tension these days. As a result, the situation may worsen, and the country is prone to increased cases of the three diseases. Such an increase is expected due to prolong upcoming religious rituals of Al-Arbaeen and related religious events where millions of people gather in one small city. During those days, people share food and slaughter animals as a part of the holy ritual of Al-Arbaeen. We believe that the Iraqi health authority is incapable of controlling these and upcoming outbreaks due to the lack of a clear infection control plan and the unavailability of emergency units in the health system. It is worth mentioning that such outbreaks may chart a pathway beginning with emergence, followed by local-scale transmission, movement beyond borders, and possibly global scale. Therefore, international collaboration is needed to combat such infections. Infectious diseases are a global thread rather than a local issue. The globalization of infectious diseases is intensified by international travel, migration, and animal and plant trade.[7] Therefore, more international collaboration is needed to conduct research focusing on infectious diseases circulating in developing countries.

Additionally, it is unwisely and mistakenly thought that the war against old infections, such as cholera, Crimean-Congo hemorrhagic fever, TB, or polio, is won. International research to address these old enemies can be co-opted and adapted for emerging threats. Finally, future plans request to align with a global view of disease risk. We must understand that we share the risks from infectious diseases globally in our world today. The lesson of the COVID-19 pandemic, including the swift spread and quickly evolved strains, teaches us the requirement for a collaborative, worldwide framework for infectious disease research and control.

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