

Movement restriction during the COVID-19 lockdown and uncontrolled diabetes

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Dear Editor,

The ongoing COVID-19 situation, declared as pandemic on 11 March 2020 by WHO, has adversely affected people's lives around the globe since its beginning at Wuhan, China, in December 2019. According to the Centers for Disease Control and Prevention (CDC), the national public health organization of the US, both type 1 or type 2 diabetes mellitus are risk factors for COVID-19. In Southeast Asia (SEA), around 90 million people have been reported to suffer from diabetes mellitus, which is characterized by deregulated use of blood glucose by the body¹. The Mayo Clinic, a non-profit medical center in the US, suggested that regular exercise, weight loss, healthy eating, and anti-diabetic medication or insulin, help to manage the disease.

The lockdown situation due to COVID-19 has compelled people around the globe to stay at home, preventing them from going to parks or a gym. Most people in the lower-middle-income countries (LMIC) in SEA, like Bangladesh or India, which are densely populated, cannot afford spacious living places due to their poor financial state and restricted movement in the city areas². In general, most diabetes patients in these countries could not go outside their homes for exercise or walking during lockdown due to movement restrictions, and most of them have had to stay in confined accommodation. Moreover, a gym at home is unavailable for most people living in LMICs. These barriers to physical exercise may have prompted uncontrolled glycemic situation throughout the pandemic period.

A study in India reported HbA1c increased by 2.26% from baseline after 30 days of lockdown and 3.68% after 45 days of lockdown³. According to research, an increase of 0.51% in the HbA1c level was found in an Indian studied

population during the pandemic⁴. LMIC and developed countries like the United Kingdom (UK) have seen an increase of 2–3 mmol/mol HbA1c in a large number of a study population⁵. Another study suggested that the new onset of diabetes during the COVID-19 period is more severe than earlier in glycemic parameters⁶. This also showed that prediabetes patients are more prone to diabetes due to a sedentary lifestyle and the lack of physical exercise during this pandemic.

Lack of physical exercise during long-term lockdown might have induced uncontrolled blood sugar levels among the patients with existing diabetes and prediabetes. As diabetes mellitus is a risk factor for COVID-19, it is paramount to control the blood sugar level within the limit following the proper recommended guidelines provided by personal physicians⁷ or any health authorities like Mayo Clinic. Some measures may be explored considering the necessity for physical exercise by diabetes patients. The concerned authorities may keep the parks and open spaces for walking during lockdown to ensure regular physical activity. The population of a specific area can be categorized based on age, gender, or health status, and different schedules may be organized for different small groups for physical exercise or walking in limited open spaces to avoid gatherings. Moreover, telemedicine and satellite health centers may be introduced in the remote areas in LMICs to inspect the diabetes patients regularly and adjust their medication as physical exercise has been interrupted. Health campaigns regarding diabetes mellitus in the COVID-19 period may be initiated by various health centers such as primary, secondary, or tertiary institutions to raise awareness.

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CONFLICTS OF INTEREST

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