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Letter to the Editor

Timely glucose monitoring-related potential risk of occupational exposure during the pandemic of COVID-19: A diabetologist's perspective



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In the past few months, Coronavirus Disease 2019 (COVID-19) has been widely spread throughout the world. As of 30 April 2020, there have been 3,059,642 confirmed cases of COVID-19, including 211,028 deaths, globally reported to World Health Organization.

Clinical data shown that comorbid diabetes was closely related with higher morbidity and mortality in COVID-19 patients [1,2]. The latest research demonstrated that blood glucose was a representative indicator of multi-organ injury and earlier predictor for poor outcomes and death in COVID-19 patients [3]. Besides diabetes patients, severe cases of COVID-19 who received corticosteroid treatment were also faced with glucose challenges. According to the therapeutic experience of Severe Acute Respiratory Syndrome, timely glucose monitoring and control may improve the prognosis of diabetes patients with coronavirus infection [4]. Therefore, intensive glucose monitoring may be necessary for COVID-19 patients, especially for those who has underlying diabetes, hyperglycemia (fasting blood glucose ≥ 7 mmol/L) or receiving corticosteroid treatment.

Traditional glucose monitoring needs blood collection every time. Frequent and invasive blood sampling means increased risk of occupational exposure for nurses when closely contacting with COVID-19 patients. In fact, high prevalence of infection in medical staffs who battled against this pandemic has already attracted greater attention. As was reported by National Health Commission of China, a total of 3387 medical workers were infected with COVID-19 by 24 February 2020. In Lombardy, Italy, as of 12 March 2020, 20%

of health care workers at intensive care units suffered from coronavirus infection [5]. An investigation on clinical characteristics of 30 medical workers infected with COVID-19 indicated that close contact (within 1 m) was the main transmission route under such circumstance [6].

Therefore, considering the increased risk of occupational exposures in traditional glucose monitoring, noninvasive operations and advanced devices which could reduce close contact and occupational exposures should be applied and promoted in hospital. Flash glucose monitoring (FGM) may be an optimized choice for hospitalized COVID-19 patients, given that medical workers could check glucose levels by a scanner for up to 14 days without invasive operations or close contact. This approach will also reduce the workload of nurses dramatically. Moreover, FGM also offers glucose trends, curves and histories, which could offer substantial assistance for glucose control. With the application of FGM for glucose monitoring, nurses could monitor glucose intensively without considerable increase of occupational exposure to COVID-19.

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Declaration of Competing Interest

None.

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