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Letter to the Editor

Letter to the editor in response to the article “Lack of type 1 diabetes involvement in the SARS-CoV-2 population: Only a particular coincidence?”



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Dear Sir,

I read with great interest the article by Pitocco et al titled “Lack of type 1 diabetes (T1D) involvement in the SARS-CoV-2 population: Only a particular coincidence?” [1]. The paper was interesting and I would like to put forward some comments.

The authors have pointed towards an apparent lack of involvement of T1D – patients in the COVID-19 patients’ population in the data from three studies. Given the lower prevalence of T1D in the general population compared to type 2 diabetes (T2D) [2], the authors do rightly opine that this observation needs to be confirmed in countries with higher prevalence of T1D.

I would like to share that, in my role in managing COVID-19 patients with diabetes, I have treated a previously known T1D patient who developed COVID-19. Also, I have come across another COVID-19 patient who was detected to have increased blood glucose levels along with ketosis for the very first-time during his admission for COVID-19. The clinical course of his diabetes in the hospital and insulin requirements pointed towards T1D. This is in line with reports where newly detected diabetes presented with ketoacidosis in COVID-19 patients [3]. However, this is indeed a miniscule fraction when compared to the proportion of people with T2D that are affected by SARS-CoV-2 and the high morbidity and mortality experienced by them [4].

Furthermore, a concept of new-onset diabetes in COVID-19 has emerged in recent days [5]. SARS-CoV-2 has been shown to infect adult human pancreatic beta cells and alpha cells in organoid models. By utilising the ‘angiotensin Converting enzyme-2’ (ACE2) expressed on the beta cells as the receptor of entry, the SARS-CoV-2 probably infects these cells and

cause their dysfunction [6]. The causative role of viruses in T1D diabetes is a well-supported hypothesis. The diabetogenic potential of SARS-CoV-2 is a matter of current research with proponents for and against the idea [7].

In general, patients with T1D have adapted themselves from an early age to stringent treatment measures like multiple daily injections of insulin, self-monitoring of blood glucose, etc. Also, they are likely to have experienced frequent hospital admissions for acute diabetic complications like hypoglycaemia or ketosis. Therefore, as suggested by the authors, one plausible explanation for the observed lesser involvement of T1D patients in this pandemic could have been their alertness to the evolving situation and the careful, precautionary approach they could have taken in protecting themselves before the contagion could strike them.

Declaration of Competing Interest

The author declared that there is no conflict of interest.

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