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Commentary

Lack of type 1 diabetes involvement in SARS-COV-2 population: Only a particular coincidence?



Dario Pitocco^{a,*}, Linda Tartaglione^a, Luca Viti^a, Mauro Di Leo^a, Andrea Manto^a, Salvatore Caputo^a, Alfredo Pontecorvi^b

^aDiabetes Care Unit, Fondazione Policlinico A.Gemelli IRCCS, Rome, Italy

^bDepartment of Endocrinology, Fondazione Policlinico A.Gemelli IRCCS, Rome, Italy

In 1591 Italian subjects affected by SARS-COV-2, there was a prevalence of 17% of type 2 diabetes [1]. In analogy to what has been shown in a Chinese population [2] and in another group of Italian subjects [3], surprisingly no cases with type 1 diabetes are apparently reported. This observation needs to be confirmed and further evaluated, for example in regions with high prevalence of the disease (Scandinavian, Finland or Sardinian), but there could be a number of reasons that justify a low incidence of SARS-COV-2 in subjects with type 1 diabetes. This result may be apparently linked to the younger age of type 1 diabetes subjects and the lower prevalence of the disease, if compared to type 2 diabetes in general population, but it could have some intriguing implications. Type 1 diabetes subjects, initially classified as a high-risk category in some countries as Italy, might have taken advantage of an early application of social distancing measures, such as smart working, indirectly supporting this kind of approach to reduce the prevalence and the negative outcomes of the infection. At the same time, from a pathophysiological point of view, type 1 diabetes is an autoimmune disorder characterized by a dysregulation of adaptative immunity with an overexpression of CD8+ T lymphocytes [4]. It is conceivable that this immunological attitude might play a protective role during SARS-COV2 infection, in which CD8+ T lymphocytes show an increased apoptosis resulting in lymphocytopenia. Indeed, we cannot rule out that there are some asymptomatic subjects with SARS-COV-2 infection in type 1 diabetic population. Finally, while the infected population has a high prevalence of hypertension, type 1 diabetes is often characterized by hyperglycemia in the absence of the other cardiovascular risk

factors. It could mean and suggest that the metabolic disturbance per se is unrelated to the outcomes of this viral infection.

Author contribution

All the authors have made substantive contributions to the article and assume full responsibility for its content.

Funding

The authors did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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* Corresponding author.

E-mail address: dario.pitocco@policlinicogemelli.it (D. Pitocco).

<https://doi.org/10.1016/j.diabres.2020.108220>

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