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## POST-COVID-19 and the pancreas



## To the editor

The COVID-19 pandemic has turned out to be a huge challenge and a burden for medical services struggling with a huge number of patients and their ailments [1]. Currently in addition to the ever-growing number of COVID-19 cases related to the next wave, our attention should also be paid to patients who will struggle with a number of POST-COVID-19 complications. The implications of COVID-19 infection are continually being studied, both in terms of the frequency with which they occur and the mechanism by which they occur. People with LONG-COVID-19 and POST-COVID-19 syndromes may be unable to do activities as well as employment. COVID-19, on the other hand, may raise the risk of chronic illness. In the context of the emergency department, we should pay particular attention to the possible increase in the percentage of patients due to pancreatic disorders. The SARS-CoV-2 virus can assault the pancreas and induce pancreatic injury and acute pancreatitis, according to research. The mechanism behind it is yet unknown. In recent years, hypertriglyceridemia has become one of the primary causes of acute pancreatitis, and hyperlipidemia is common in COVID-19 patients. COVID-19 individuals had a high rate of hyperlipidemia, with a total incidence of 32.98%. Hyperlipidemia may have a role in the development of acute pancreatitis in COVID-19 and POST-COVID-19 patients [2]. In addition, although we already know about the adverse impact of diabetes on the course of COVID-19, newer and newer reports about it are appearing [3]. Researchers discovered reduced granularity in beta-cell insulin production after infection with COVID-19, as well as decreased glucose-stimulated secretion. Even though they had no prior history of diabetes, some COVID-19 individuals acquired insulin resistance and raised blood glucose levels. The immune system can stay active for months after a COVID-19 infection, lowering the efficacy of insulin in the liver, muscles, and fat cells. In a large cohort study, the population following COVID-19 was compared to acute upper respiratory infections (AURI). Age, gender, health insurance, COVID-19 / AURI index month, and comorbidities including obesity, hypertension, hyperlipidemia, myocardial infarction, and stroke were used to match patients. COVID-19 infected individuals had a greater risk of type 2 diabetes than AURI infected people. COVID-19 patients acquired diabetes at a rate of 15.8 per 1000 individuals per year, compared to 12.3 for AURI patients. The adjusted IRR for type 2 diabetes was 1.28 when marginal models were used. Overall, the COVID-19 group had a 28% higher relative risk of acquiring diabetes than the AURI group [4]. Due to the induction of diabetes and acute pancreatitis in the POST-COVID-19 condition, the pancreas should definitely be a focus of our attention. Patients with new undiagnosed diabetes, as well as acute pancreatitis that is most likely connected to cholesterol levels, should be given extra care. Studies have shown that persons with high levels of high-density

lipoproteins in their blood are less prone to severe COVID-19 infection, which is another important factor to consider among COVID-19 patients [5]. During our work, we must be ready for the increased number of patients suffering from previously undiagnosed diabetes acquired as the POST-COVID-19 syndrome, as well as those who, due to the pandemic, were unable to obtain this diagnosis, which may overlap. COVID-19 itself affects the lipid metabolism, but additionally the overlapping mode of isolation that took place may mean that we will have to deal with a significantly increased percentage of patients with acute pancreatitis. More research is needed to explain the effects of COVID-19 and the LONG-COVID-19 syndrome on the pancreas.

## Funding

This research received no external funding.

## Institutional review board statement

Not applicable.

## Informed consent statement

Not applicable.

## Data availability statement

Source data files are available upon request.

## CRediT authorship contribution statement

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## Acknowledgments

The study was supported by the Polish Society Disaster Medicine.

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16 April 2022