What the COVID-19 Pandemic Showed Us: Limited Time Resources as an Important Factor of Diabetes Management

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Abstract from Grabia M, Markiewicz-Żukowska R, Puścion-Jakubik A, et al.: The nutritional and health effects of the COVID-19 pandemic on patients with diabetes mellitus. *Nutrients*. 2020;12(10):E3013.

Keywords

Diabetes mellitus · COVID-19 · Food choices · Eating behaviours · Lifestyle habits · Survey · Hygiene · Sleep · Stress · Nutrition

Abstract

COVID-19 related restrictions aimed at curbing the spread of the coronavirus result in changes in daily routines and physical activity which can have a negative effect on eating and health habits. The aim of the study was to assess the impact of the COVID-19 pandemic on patients with diabetes and their nutrition and health behaviours. A survey conducted in July 2020 included 124 individuals with type 1 ($n = 90$) and 2 ($n = 34$) diabetes mellitus from Poland. To assess nutritional and health behaviours, an on-

line questionnaire covering basic information, anthropometric data, and details regarding physical activity, eating, and hygiene habits was used. Almost 40% of all respondents with type 1 and 2 diabetes mellitus (DM) stated that their disease self-management had significantly improved. Over 60% of all participants declared that they had started eating more nutritious and regular meals during the COVID-19 pandemic. Enhanced hygiene, in particular, during the period, a statistically significant increase in hand sanitiser use was reported by respondents (18% vs. 82%, $p < 0.001$). The study demonstrated that the pandemic had a significant impact on the behaviour of patients with DM. Improved disease self-management and making healthy, informed food and hygiene choices were observed.

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Knowledge Transfer

Background

The COVID-19 pandemic has led to an unprecedented home confinement of a large percentage of people around the world. Diabetes is considered a global epidemic on the rise, strongly associated with lifestyle choices, and with significant disabling consequences and an increased risk of death if not well-controlled. There is a complex interplay between COVID-19 and diabetes, with some of its parameters better reported than others. The effects of the measures taken to combat the COVID-19 spread on diabetes management have not been adequately addressed.

Study Results

The study by Grabia et al., published in *Nutrients* in late summer 2020 [1], deals with the effect of the COVID-19 pandemic home confinement on the lifestyle of patients with diabetes in Poland. The researchers studied the differences in dietary, exercise and hygiene

habits of 124 patients with diabetes before and during the COVID-19 confinement by the use of an online questionnaire. Separate analyses were performed for type 1 and type 2 diabetes patients, but the results were the same for both groups. It was found that in general, dietary habits improved in most patients during the pandemic confinement, e.g. increased consumption of water as well as healthy and fresh foods, and decreased consumption of ready-made snacks. Sleeping patterns and hygiene habits also improved during the pandemic with the majority of participants increasing their sleep duration and the use of hand sanitizers. Exercise levels were reduced, a finding mainly explained by the confinement rules that allowed only non-organized forms of outdoor exercise such as walking and running. On the other hand, sitting time as assessed by television watching and sitting in front of a computer greatly increased with 60% of study participants spending more than 5 hours per day looking at screens during the pandemic (Fig. 1).

Fig. 1. The impact of the COVID-19 pandemic on food and drink intake according to respondents' responses [1].

Even though administering an online questionnaire was one of the few ways the study could be conducted during the pandemic, it came with several limitations, some of which, like the rather limited number of patients, were reported by the authors. Another important limitation was the young age of the patients included in the analysis (with the age 75th quartile being 28 years for type 1 diabetes and 44 years for type 2 diabetes patients). This is a common limitation of online surveys due to the technological illiteracy and non-participation in online groups of most older people. However, this limits the generalization of the study results in regards to the largest group of diabetes patients, the middle-aged and older patients with type 2 diabetes. Additionally, it would have been useful if the authors could have provided data on the effects the differences in lifestyle had on some markers of disease management like HbA1c, especially because contradictory changes, like improvement in dietary habits and sleep time but decrease in exercise and increase in sitting time, occurred.

Conclusion for Clinical Practice

Despite these limitations, the study provides food for thought for a very important point in clinical practice, not only during the COVID-19 pandemic: Limited time resources are important factors in diabetes management in multiple ways and affect areas like sleep duration, food preparation and dietary choices. Time limitations also affect exercise time, posing an additional burden for diabetes management. The confinement rules during the first wave of

the COVID-19 pandemic lessened these limitations in comparison to the pre-COVID-19 life with lots of activities available outside of home. Health professionals dealing with patients with diabetes should always keep in mind that even if we accurately follow medical and dietetic diabetes management algorithms, we might not be providing the patients with the best care if, due to time limitations, they are not able to follow the advice, i.e., prepare meals, drink water and get adequate sleep. An individually tailored approach considering all aspects of the patient's life including time limitations could serve our patients better and allow both them and us to better manage diabetes.

Disclosure Statement

I hereby confirm that there are no conflicts of interest with regard to this commentary.

References

- 1 Grabia M, Markiewicz-Żukowska R, Puścion-Jakubik A, et al.: The nutritional and health effects of the COVID-19 pandemic on patients with diabetes mellitus. *Nutrients*. 2020;12(10):E3013.

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