Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
health conditions including diabetes through our CompleteHealth™ platform. This is a digital health platform where members, once registered, can monitor and track their health. This presentation describes how virtual self-care support was provided to members with diabetes during the pandemic.

**Aim:** To examine how providing virtual self-care support during the COVID-19 pandemic to people living with diabetes is a viable method of helping them manage their condition.

**Method:** A retrospective study was conducted with 88 members with diabetes registered onto the mDoc CompleteHealth™ platform between March 2020 and June 2021. Members were provided with self-care support through the mDoc’s virtual omni-channel support system: weekly messages were sent via WhatsApp and the CompleteHealth™ chat to members and the coach-led multidisciplinary care teams (including a nutritionist and fitness coach) called members to provide lifestyle modifications on diet and exercise as well as self-care education on diabetes management. The members were also encouraged to check their blood glucose levels regularly and adhere to their prescribed medications. The blood glucose levels of the members were collected through the CompleteHealth™ platform where members log in health metrics either by themselves or through their health coach. Members also received information on the COVID-19 prevention protocols and where to get vaccinated when COVID-19 vaccine rollout began in Nigeria.

**Results:** The average age of members with diabetes registered on the CompleteHealth™ platform over the study period was 58 years old with 35.3% being men and 64.7% being women. Of the 88 members who received this virtual support, with multiple FBG values, 78 (88.6%) showed an improvement in their control of their blood sugar levels, with the average value for their FBG falling from 163.2 mg/dL at baseline to 133.6 mg/dL by June 2021. These members also saw their average weekly exercise duration increase from 59.3 minutes per week to 72.7 minutes per week.

**Discussion:** We saw a decrease in blood sugar levels in a majority of members that received weekly virtual support from a health coach-led multidisciplinary care team over the 15 months that the self-care support was provided. This intervention helps people manage diabetes from afar, which is important as self-care has become an increasingly essential part of the global healthcare system, especially due to the limited access to face-to-face doctor consultations during the COVID-19 pandemic.

We believe that empowering people with the self-efficacy they need to take care of themselves can lead to better control of their chronic disease which will eventually lead to better health outcomes.

Diabetes Research and Clinical Practice 186S (2022) 109382
https://doi.org/10.1016/j.diabres.2022.109379

**IDF21-0567**

Analysis of mortality and cardio-metabolic comorbidities in COVID-19 patients from Eastern European region

I. Popescu, C. Bumgardner, D. Iancu, G.M. Mussman, C.B. Hughes, J.L. Fowlkes, C. Preda

**a** University of Kentucky, Barnstable Brown Diabetes Center, Lexington, USA
Development of T1D. Contracting SARS-CoV-2 virus may induce diabetes (T1D). Viral infections may play a role in triggering the onset of Type 1 Diabetes (T1D) along with COVID-19 infection. Viral infections such as SARS-CoV-2 virus may trigger the development of autoimmune disorders such as T1D. Exploring the relationship between COVID-19 infection and T1D onset is needed for better understand the effect of COVID-19 infection and outcome on pediatric patients with comorbidities. Further explorations are also needed to study the relationship of SSS and autoimmune disorders as well; to fully appreciate the impact on such patients.

Diabetes Research and Clinical Practice 186S (2022) 109380
https://doi.org/10.1016/j.diabres.2022.109380

IDF21-0574
Type 1 Diabetes onset and COVID-19 infection in a child with Sanjad Sakati Syndrome: a case from Kuwait
F. Othmana, K. Al-kandari, F. Mandani, Z. Al-mazidi, D. Al-abdulrazzaqa, H. Al-kandariab
aDasman Diabetes Institute, Department of Population Health, Kuwait City, Kuwait
bKuwait University, Faculty of Medicine, Department of Pediatrics, Kuwait City, Kuwait

Background: Sanjad Sakati Syndrome (SSS) is an autosomal recessive multisystem disorder characterized by congenital hypoparathyroidism, prenatal and postnatal growth and mental delay, dysmorphic features, and hypocalcemia seizures. It has not been linked with autoimmune disorders such as Type 1 Diabetes (T1D). Viral infections may play a role in triggering the development of T1D. Contracting SARS-CoV-2 virus can induce an autoimmune response by damaging the pancreatic β cells and accelerate the onset of T1D. To the best of our knowledge, no case studies of SSS has been reported to develop T1D were made, and insulin therapy was started. No family history of diabetes was reported.

Aim: To present a child with SSS who was newly diagnosed with T1D and SARS-CoV-2 infection (COVID-19).

Method: Data on the patient were extracted from the Childhood Onset Diabetes electronic Registry (CODER) in Kuwait.

Results: The child was diagnosed early in life with SSS by tubulin-specific chaperone E (TBCE) gene mutation. The child is under multidisciplinary care and managed by alphacalcidol treatment. In May 2021, she presented with a history of fever, cough, polyuria, polydipsia, and poor appetite which lasted for 6 days. On investigations, random blood sugar level was 22 mmol/l and HbA1c level was 10%. There was no evidence of diabetic ketoacidosis. Autoantibodies to glutamic acid decarboxylase (GAD) and thyroperoxidase antibodies (TPO) were positive, with normal thyroid function results. Serum insulin and c-peptide levels were low (0.93 miu/ml, 28 pmol/l respectively). Thus, T1D diagnosis was made, and insulin therapy was started. No family history of diabetes was reported. On admission, the child tested positive for SARS-CoV-2 PCR and had positive contacts with family members with COVID-19 infection. As per WHO COVID-19 infection severity criteria, the child's condition was classified as mild. She was discharged home with no short-term sequelae of COVID-19 infection; diabetes and dietary education was provided.

Discussion: To the best of our knowledge, this is the first case reported in literature of a patient with SSS who presented with T1D onset along with COVID-19 infection. Viral infections such as SARS-CoV-2 virus may trigger the development of autoimmune diseases such as T1D. Exploring the relationship between COVID-19 infection and T1D onset is needed for better understand the effect of COVID-19 infection and outcome on pediatric patients with comorbidities. Further explorations are also needed to study the relationship of SSS and autoimmune disorders as well; to fully appreciate the impact on such patients.

Diabetes Research and Clinical Practice 186S (2022) 109380
https://doi.org/10.1016/j.diabres.2022.109380

IDF21-0593
COVID-19 hospitalizations and cardio-cerebrovascular complications at three months in people with diabetes
M. Iommi, C. Reno, J. Lenzi, R. Messina, M. Altini, F. Bravib, M.P. Fantinica, P. Di Bartoloc
aUniversity of Bologna, Department of Biomedical and Neuromotor Sciences, Bologna, Italy
bRomagna Local Health Authority, Health Directorate, Ravenna, Italy
cRomagna Local Health Authority, Diabetes Unit, Ravenna, Italy

Background: Scientific research highlighted a high prevalence of concomitant conditions, including diabetes, among patients with severe/fatal COVID-19 manifestations. Considering the high worldwide prevalence of this condition, people with diabetes and COVID-19 could represent a large vulnerable segment of the COVID-19 patients. Thus, it is essential to assess the burden of SARS-CoV-2 infection in people with diabetes to adopt the appropriate measures to mitigate its impact.

Aim: The aims of the study are to assess the probability of being admitted to Intensive Care Units (ICUs) for patients with and without diabetes during their first hospitalization for COVID-19 and to evaluate the three-month risk of hospitalization for cardio-cerebrovascular complications in those who survived COVID-19 hospitalization.

Method: Population-based observational study. Residents aged ≥18 years of the Local Health Authority of Romagna (Emilia-Romagna, Italy) were considered.

Using regional administrative databases, the annual incidence of hospitalization for COVID-19 with 95% confidence interval (95% CI) was estimated in a prevalent cohort of patients with diabetes (those with at least one hospitalization for diabetes or at least two distinct drug prescriptions of Glucose-Lowering Medication in the previous two years from 15/02/2020). In patients hospitalized for COVID-19 with and without diabetes a multiple logistic regression was used to assess the probability of being admitted to ICUs, adjusting for sex, age and Elixhauser comorbidities. Multiple Cox regression was used to evaluate the risk of cardio-cerebrovascular complications in those who survived COVID-19 hospitalization.

Results: From 15/02/2020 to 14/02/2021, 942 (1.5%) over 61,886 patients with diabetes had a hospitalization with a COVID-19 diagnosis, with an annual incidence of 4.27 (95% CI [4.01; 4.55]) per 100,000 person-days.

Among all patients hospitalized for COVID-19 (n=5,166), multiple logistic regression showed that patients with diabetes had a 35% higher likelihood of being admitted to ICUs as compared with those without diabetes (OR=1.35; 95% CI [1.03; 1.76]).

In patients who survived the first COVID-19 hospitalization (n=3,983), multiple Cox regression show no difference in the