

experiences. Post-elective surveys assessed student satisfaction with elective components and change in comfort levels with T2DM management and social determinants of health (SDH) on diabetes care.

Results: Overall, 87% (n=13) of students were “extremely satisfied” with the elective. Increased comfort was seen with management of type 2 DM and the impact of SDH on DM care (DM 88% neutral/uncomfortable to 94% comfortable, SDH 50% neutral/uncomfortable to 94% comfortable). Students were satisfied with the quality of patient care and requested opportunities for more direct involvement.

Conclusions: This virtual endocrine elective shows that curricula can be creatively designed to educate students in endocrinology, assess students across core competencies, and demonstrate impacts of telehealth and social determinants of health on endocrine and patient care.

Diabetes Mellitus and Glucose Metabolism

COVID-19 AND DIABETES

Evaluating the Use of Telemedicine in Endocrinology Clinic

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The COVID-19 pandemic changed patient-physician interaction. As the need to reduce COVID-19 transmission, many clinic providers have converted their in-person visits to video or phone visits. Our endocrinology clinic initiated tele visits early on when the pandemic had just started. Telemedicine may help with patient's compliance by decreasing various burdens. Some studies show that patients and providers hope telemedicine will continue after the crisis. In this study we evaluated benefits and challenges of telemedicine in our endocrinology clinic. Patients who had a telemedicine endocrinology visit after informed consent were surveyed on 10 questions regarding benefits and limitations of the tele visits compared to the clinic visit. Patient also responded if they want to continue with telehealth after COVID-19 pandemic. Providers also were surveyed about the benefits and limitations of telemedicine and responded if they want to continue with telemedicine after pandemic. We also analyzed no-show rate from January 2020 through May 2020 for 6 weeks before and after the implementation of telemedicine. Among 109 patients who were interviewed 65% declared that they would like to continue with telemedicine after pandemic. Total of 42% of patients prefer video visit and 37% prefer phone calls. Among Interviewers 45% report benefit of spending less time, however 54% stat the time of meeting, itself was about the same. 54% believe they spent less money with telemedicine. 37% of interviewers report no limitation for telehealth while 25% report connection difficulty. 63% of patients state they do not have any difficulty traveling to the hospital. 90% of the patients declare all their question and concerns were responded and 77% stated the quality of care with telemedicine is almost the same via clinic visit. Among providers 75% want to continue telehealth after

COVID-19 pandemic. 50% of providers mention patient satisfaction and 25% notice time saving as benefits. 46% of the providers mention lack of physical exam and 40% mention technology connection as the limitation for video visit. 60% of providers believe lack of exam is the limitation of phone visit. 87% of the providers believe the quality of care via phone is not like in clinic visit while 75% of the providers believe the quality of care is similar in video visit compare to in clinic visits. No show rate decreased from 30% to 27% after the implementation of telemedicine in 6 weeks prior and after pandemic. Endocrinology clinic has significant number of patients who need long term close follow up for medication adjustments, symptom checks and counseling. Given patients and providers satisfaction rate, telemedicine can be incorporated as part of regular clinic visits after the Covid crisis ends. Telehealth can be more efficient for both patients and providers but there are challenges which needs to be addressed.

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COVID-19 AND DIABETES

Glycaemic Control in Children and Adolescents With Type 1 Diabetes Following a Single Telehealth Visit:What Have We Learned From the COVID-19 Lockdown?

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Aims: Children with chronic diseases were unable to receive their usual care during COVID-19 lockdown. We assessed the feasibility and impact of telehealth visits on the time-in-range (TIR) of pediatric individuals with type 1 diabetes (T1D). **Methods:** An observational multicenter real-life study. Patients scheduled for an in-clinic visit during the lockdown were offered to participate in a telehealth visit. Sociodemographic, clinical, continuous glucose monitor and pump data were recorded 2 weeks prior and 2 weeks after telehealth visit. The primary endpoint was change in relative-TIR, i.e change in TIR divided by the percent of possible change (Δ TIR/(100-TIRbefore)*100). **Results:** The study group comprised 195 individuals with T1D (47.7% males), mean \pm SD age 14.6 \pm 5.3 years, diabetes duration 6.0 \pm 4.6 years. Telehealth was accomplished with 121 patients and their parents (62.0%); 74 (38.0%) did not transfer complete data. Mean TIR was significantly higher for the two-week period after the telehealth visit than for the two-week period prior the visit (62.9 \pm 16.0, p<0.001

vs. 59.0±17.2); the improvement in relative-TIR was 5.7±26.1%. Initial higher mean glucose level, lower TIR, less time spent at <54 mg/dl range, longer time spent at 180–250 mg/dl range, higher daily insulin dose and single parent household were associated with improved relative-TIR. Multiple regression logistic analysis demonstrated only initial lower TIR and single-parent household were significant, odds ratio: -0.506, (95%CI -0.99,-0.023), p=0.04 and 13.82, (95%CI 0.621, 27.016), p=0.04, respectively.

Conclusions: Pediatric patients with T1D benefited from a telehealth visit during COVID-19. This modality and its benefit should be employed, and used in the future as well. However, this modality is not yet suitable for a considerable proportion of patients.

Diabetes Mellitus and Glucose Metabolism

COVID-19 AND DIABETES

High Prevalence of Diabetes in Hospitalized Patients With COVID-19 and Its Association With Greater Severity of COVID-19 in Delhi, India

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Abstract: India is home to 77 million people with diabetes and has a large number of COVID 19 cases, albeit with a low fatality (<1.5%). Little Indian data is available about the prevalence of diabetes in COVID 19 and its impact on outcomes. This observational prospective study (approved by the Institutional Ethics Committee) was carried out in a designated COVID facility, largely catering to middle and upper socioeconomic classes. A total of 401 (125 F, mean age 54 y, range 19–92 y) consecutive adults hospitalized with COVID-19 infection as proven by positive nasal swab for SARS-CoV2 by RT-PCR were included. Diabetes mellitus was diagnosed either by known history or HbA1c≥6.5%. Severity was assessed using the WHO ordinal scale¹. Clinical outcomes and markers of inflammation were compared between diabetes and non-diabetes groups. Out of 401 patients, 210 (52.4%) had either diabetes (189,47.1%) or hyperglycemia requiring insulin treatment (21, 5.2%). 152 (37.9%) reported known diabetes, and 37 (9.2%) had preexisting but undiagnosed diabetes (HbA1c≥ 6.5%). People with diabetes were significantly older (mean age 59.9 vs 47.7 y), and had a higher proportion of men (74.6 vs 63.7 %), hypertension (58.7 vs 25%), CAD (13.8 vs 4.2%), and CKD (5.3 vs 0.9%) and a higher mean baseline severity score (3.4±0.7 vs. 3.2±0.5, p=0.000). The diabetes group had a higher number of severe cases (WHO scale≥5) (20.1% vs 9%, p=0.002) and higher mortality (6.3 vs 1.4%, p=0.015). A higher proportion of the diabetes group required ICU admissions (24.3 vs 12.3%, p=0.002), glucocorticoid therapy (78.3 vs 54.2%, p=0.000), oxygen administration (53.4 vs 28.3%, p=0.000), inotropic support (7.4 vs 2.4%, p=0.019), and renal replacement therapy (3.7% vs 0, p=0.005). The mean duration of hospital stay was higher for the diabetes group (10.4 vs 9.1 days, p=0.016). Of those who died, 12/15 (80%) had diabetes. Baseline Hba1c (n=331) showed a significant correlation with outcome severity scores (r

0.136, p=0.013). Markers of inflammatory response, CRP (41.0±4.4 vs. 19.4±3.8, p=0.000), ferritin (404.8±41.6 vs. 258.8±40.2, p=0.012), IL6 (65.5±11.6 vs. 26.9±4.4, p=0.002), LDH (321.8±10.1 vs. 286.8±8.4, p=0.008) were significantly higher in the diabetes group. Procalcitonin and D Dimer did not differ significantly. In conclusion, we report the highest prevalence of diabetes in a hospitalized COVID-19 population so far. The diabetes group had more severe disease and greater mortality. Baseline HbA1c correlated with poor outcomes. The comorbidities could have contributed to these poorer outcomes in the diabetes group. Strategies to improve outcomes in this pandemic it is imperative to include screening for and better control of diabetes.

Reference: ¹https://www.who.int/blueprint/priority-diseases/key-action/COVID-19_Treatment_Trial_Design_Master_Protocol_synopsis_Final_18022020.pdf

Diabetes Mellitus and Glucose Metabolism

COVID-19 AND DIABETES

How Did Elderly T2D Patients Cope With the Quebec Covid-19 Lockdown

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The Canadian city most affected by the first wave of the Covid-19 (CV19) pandemic was Montreal. Montreal was in lockdown (LD) from Mar 13- Jun 15, 2020. The elderly, diabetics, and the economically disadvantaged are among the groups most at risk of CV19 and the psychosocial effects of LD. We sought to ascertain the effect of the LD on the wellbeing of lower income elderly T2D pts. As we felt it unethical to do non-essential testing during a pandemic we relied on clinically available HbA1c's as surrogates for metabolic wellbeing. Most HbA1c's used reflect a high (r=0.91) correlation with 3 month values for the time periods of interest. The study group was composed of 38 mostly elderly T2D pts. All pts lived alone or with similarly aged spouses in non-institutional settings in a lower middle class neighborhood of Montreal. None had organized domestic help from family or the community. None had documented acute medical episodes or medication changes between Jan and Sept 2020. None have conditions known to render HbA1c non reliable. Pts were interviewed by telephone to assess their overall coping with the LD. In particular they were questioned about medical issues, difficulties obtaining medications +/- groceries and psychological or social stress. HbA1c values between Jan 1 - Mar 15, 2020 and after Aug 25, 2020 (non LD values) and between Apr 20 - Aug 15, 2020 (LD values) were recorded. Differences in the recorded non LD and LD HbA1c's were compared and analyzed for the group as a whole, by gender, and by insulin use. There were 38 pts, 22 M 56–77 yrs (mean 72.1) and 16 F 41–90 yrs (mean 75.2), 89.5% (34/38) were > 65 yrs. Ten M and 9 F were on insulin. No pt reported severe hypoglycemia or weight fluctuations. All claimed to be following public health guidelines. There were no significant differences (d) between the mean HbA1c's non LD compared to LD neither for the entire group (d= 0.2), M (d=0.2), F (d=0.2), insulin treated pts (d=0.3) nor those not treated with insulin