was missed medications. The mean time taken to resolve the DKA was 931 (± 574) minutes.

CONCLUSION

Based on the results, the number of readmissions for DKA is worrying and the patients admitted also have high insulin doses, highlighting a possible consequence of over-insulinization. A longer period of evaluation is necessary to investigate the effect of SGLT2 inhibitors use on DKA admissions, as well as further focus on the causes of prolonged time for DKA resolution which may impact the length of hospitalization.

EP_A041

ONE-YEAR TREATMENT OUTCOMES WITH SUBCUTANEOUS SEMAGLUTIDE AT HOSPITAL QUEEN ELIZABETH II: A RETROSPECTIVE ANALYSIS

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INTRODUCTION/BACKGROUND

Glucagon-like Peptide-1 receptor agonists (GLP-1 RAs) mimic endogenous GLP-1, improving glycemic control and promoting weight loss. Nevertheless, there is limited data available on the effect of semaglutide use among type 2 diabetes (T2D) patients undergoing insulin therapy, particularly those with high insulin requirements.

METHODOLOGY

We aimed to investigate the effects of the addition of subcutaneous semaglutide to a standard regimen of insulin on T2D patients, focusing on changes in HbA1c levels, body weight and total daily dose (TDD) of insulin. In this retrospective chart review, T2D patients who received once-weekly subcutaneous semaglutide with insulin were recruited from the Endocrine Unit of the Hospital Queen Elizabeth II (HQE II) from 2021 to 2023. Follow-up assessments occurred at 3-6 months and 9-12 months post-initiation, with the recording of key parameters such as HbA1c, weight, insulin TDD and adverse events.

RESULTS

Our study recruited a total of 35 patients and found that there were significant improvements across all parameters. HbA1c levels decreased from a mean of 8.9% at baseline to 7.7% at 9-12 months, representing a reduction of 1.2% (p <0.001). Weight decreased from a mean of 92.0 kg at baseline to 84.2 kg at 9-12 months, with a mean reduction of 7.7 kg (-8.4%) (95%CI: 4.9-10.6, p <0.001). Insulin TDD decreased from a median of 72u (40 - 114) at baseline to 48u (24 - 80) at 9-12 months (p <0.001). Six individuals experienced gastrointestinal side effects, with one discontinuing due to intolerable diarrhea. In the subgroup with insulin resistance, there were profound reductions in TDD of insulin used without compromising glycemic control.

CONCLUSION

The study confirmed the efficacy of once-weekly semaglutide in managing T2DM patients on insulin therapy, including those on basal-bolus and pre-mixed regimens. Further research is recommended to assess its effects on patients with high insulin requirements.

EP_A042

RISK OF KETOACIDOSIS WITH LUSEOGLIFLOZIN IN TYPE 2 DIABETES MELLITUS PATIENTS ON MODERATE DOSE INSULIN THERAPY: A RANDOMISED CONTROL TRIAL

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INTRODUCTION/BACKGROUND

Sodium-glucose cotransporter-2 (SGLT2) inhibitors, one of which is Luseogliflozin, are associated with a recognized risk of euglycemic diabetic ketoacidosis (DKA) particularly in patients on insulin therapy.

METHODOLOGY

This study aimed to assess the risk of ketoacidosis with Luseogliflozin in patients with type 2 diabetes mellitus (T2D) on moderate doses of insulin. This study involved patients who were attending the Endocrine Clinic, with stable disease and no recent acute events. The participants were randomized to either add-on Luseogliflozin to standard medical therapy or standard medical therapy only. Ketoacidosis was assessed using fasting blood and urine ketone pre- and post-intervention. The study duration was 12 weeks. Independent t-test was performed to assess changes in ketone levels. Pearson's Correlation was performed to determine the relationship between ketone levels with HbA1c and fasting blood glucose.

RESULTS
A total of 40 patients completed the study, with 20 patients receiving Luseogliflozin and the rest were on standard medical therapy. The mean age and HbA1c for patients were 53.6 ± 7.6 years and 9.1 ± 1.4%, respectively. There was a non-statistically significant increase in fasting blood ketones with the addition of Luseogliflozin compared to standard therapy (0.04 ± 0.12 vs 0.05 ± 0.15 mmol/L; p = 0.735). Similarly, there was a non-statistically significant increase in urine ketones (0.03 ± 0.3 vs 0.03 ± 0.1 mmol/L; p = 1.00). Correlation analysis demonstrated that the increased blood ketone levels were more likely to occur with higher HbA1c (r = 0.324; p = 0.04) and higher fasting blood glucose (r = 0.447; p = 0.004).

CONCLUSION
The addition of Luseogliflozin in T2D patients on moderate-dose insulin was not associated with a significant increase in fasting blood and urine ketone levels. However, those with higher HbA1c and FBS seemed to be more vulnerable to elevated blood ketone levels. Thus, this study suggests that Luseogliflozin is safe but should be used with caution in those with higher HbA1c and FBS.

EP_A043

RAMADAN FASTING AMONG TYPE 1 DIABETES MELLITUS PATIENTS IN A SINGLE TERTIARY CENTRE

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INTRODUCTION/BACKGROUND
Ramadan fasting among patients with Type 1 diabetes mellitus (T1DM) carries a higher risk given the nature of the disease and therapy used. Currently, Ramadan fasting practice among Muslim T1DM patients in our centre is not known.

METHODOLOGY
This is a questionnaire-based study done among Muslim patients attending the T1DM clinic in Hospital Putrajaya. All Muslim patients attending the clinic from January to April 2024 (before Eid) were given the questionnaire to fill out.

RESULTS
There were 56 respondents, 22 male and 34 female. The mean age was 30.2 years (± 8.04). The mean duration of illness was 13 years (± 8.39). The majority (79%) of the respondents received tertiary education. Most respondents (88%) have received advice from healthcare providers on Ramadan fasting. Four out of 5 intended to fast during Ramadan. Out of those who intended to fast, 3 quarters had high risk based on the DAR-IDR (Diabetes and Ramadan-International Diabetes Federation) risk calculator. Among all the respondents, 80% had high risk, 18.2% had moderate risk and only 1.8% had low risk. In comparison to the actual risk, only about one-third of total respondents perceived themselves as having high risk, half perceived themselves as moderate risk and the rest felt they had low risk. Forty percent of the respondents correctly estimated their risk of fasting. In terms of diabetes disease knowledge, our respondents had a mean score of 11.7 (± 2.29). Two-thirds of the respondents achieved high scores, 30.4% had average scores and only 3.6% had low scores.

CONCLUSION
Among Muslim T1DM patients in our centre, the majority received tertiary education and had been advised on Ramadan fasting in the past. Despite having high risk, most opted to fast. Therefore, Ramadan fasting education must emphasize measures to fast safely.

EP_A044

CLINICAL UTILITY OF KIDNEY FAILURE RISK EQUATION IN DIABETES AND CHRONIC KIDNEY DISEASE

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INTRODUCTION/BACKGROUND
Heterogeneity in disease course and prognosis makes managing CKD difficult. An accurate risk stratification algorithm is crucial to predict CKD progression to ESKD for individualized management. The Kidney Failure Risk Equation (KFRE), developed in 2011, is the most widely validated prediction model for 2- and 5-year ESKD progression risk across multiple underlying etiologies with potential for clinical utility.