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.

METHODOLOGY

This study aims to investigate if KFRE risk scores differ significantly among individuals with or without diabetes. We conducted a retrospective study on adults with CKD (eGFR 15-59 ml/min/1.73 m²) who attended our hospital outpatient follow-up from January to December 2022 with available data for calculation of 4-variable KFREs [age, sex, eGFR, urine albumin-creatinine ratio (uACR)]. Two-sample t-test and Mann-Whitney U test were performed to analyse the difference between the two groups.

RESULTS

Out of 10,391 adults with CKD, 1,823 that fulfilled the inclusion criteria were analysed, with a mean age of 70 years, 52% were male, mean eGFR of 45ml/min/1.73 m² and median uACR of 8.4 mg/mmol. Majority (84%) have diabetes with a mean HbA1c of 7.8%. Individuals with CKD and diabetes had lower eGFR, heavier albuminuria and had younger age than those without diabetes ($p < 0.001$). These findings further translate to statistically significant higher KFRE risk scores for individuals with diabetes. For those with eGFR between 30-59 ml/min/1.73 m², 9.4% of individuals without diabetes and 14.8% of those with diabetes met the referral criteria for nephrology care when setting a KFRE score threshold of more than 5% over 5 years.

CONCLUSION

The lack of uACR monitoring resulted in a smaller sample size than anticipated. We advocate all healthcare professionals to monitor uACR and utilize the KFRE score in clinical practice when managing CKD or diabetes with eGFR between 15-60 ml/min/1.73 m² to guide referral to multi-disciplinary care and raise public awareness about the risk of ESKD.

EP_A045

THINGS MAY NOT ALWAYS BE AS THEY SEEM

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INTRODUCTION/BACKGROUND

Atypical diabetes and late-onset Type 1 Diabetes Mellitus are rare, affecting only 10% of patients with diabetes. Presence of diabetes-associated autoantibodies such as Anti-Islet Cell (ICA), Anti-Glutamic Acid Decarboxylase (GAD), Anti-Insulinoma Associated Antigen-2 (IA2) and Zinc Transporter 8 (ZnT8) point towards type 1 over type 2 diabetes mellitus.

CASE 1

A 55-year-old male with underlying autoimmune hypothyroidism and vitiligo was admitted for diabetic ketoacidosis (DKA) with the following laboratory findings: HbA1c 16.6%, random blood sugar (RBS) 43 mmol/L, serum ketone 6.7 mmol/L, pH 7.06 HCO3 5.1. He was lean with a body mass index (BMI) of 21 kg/m² and no family history of diabetes. He was discharged well with metformin, dipeptidyl peptidase-4 inhibitor (DPP-4i) and basal insulin. Follow-up after two weeks showed erratic glucose control. Results showed positive ICA: 224 IU/ml (>28 IU/ml) and GAD: >280 IU/ml (>17 IU/ml) but negative IA2: 3.611 (<28 IU/ml) and low C-peptide 146 pmol/L (<367 pmol/L). He was diagnosed with latent autoimmune diabetes of adults (LADA), with differentials being late-onset Type 1 Diabetes Mellitus and autoimmune polyglandular syndrome. Treatment was revised to basal-bolus insulin. HbA1c improved to 11.6% within one year.

CASE 2

A 33-year-old female, obese (BMI 28 kg/m²), with features of insulin resistance and diabetic parents, was admitted for DKA. – Laboratory results were as follows: RBS 31 mmol/L, serum ketone 5.3 mmol/L, pH 7.23, HCO3 14. Baseline HbA1c was 17.1%. She was started on subcutaneous insulin isophane) 34 units, T, Metformin XR 2 g ON and T and Vildagliptin 50 mg BD (DPP-4i) and was discharged with these medications. Self-monitoring blood glucose after two weeks was unsatisfactory. Results revealed normal C-peptide of 470 pmol/L (367-1467 pmol/L), negative IA2: <2.5 IU/ml (<28 IU/ml), positive ICA: 157IU/ml (>28 IU/ml) and GAD: >280 IU/ml (>17 IU/ml). Maturity-onset diabetes of the young (MODY) was considered. Adding sulfonylureas resulted in suboptimal glycaemic control. HbA1c improved to 14.6% within one year after switching to premixed insulin.

CONCLUSION

Subclassifying diabetic patients with positive diabetes-associated autoantibodies necessitates a comprehensive approach, considering family history, phenotype and targeted genetic testing.