hospital-based diabetes clinics (Hospital Putrajaya, Hospital Selayang, Hospital Kuala Lumpur, and Hospital Tuanku Ja'afar). The primary outcome was HbA1c reduction at 6 months of dulaglutide therapy, while the secondary outcomes were HbA1c reduction at 12 months and weight loss at 6 and 12 months.

RESULTS

In this study, the patients' mean baseline age, HbA1c and weight were 54 years old, 8.33% and 91.2 kg, respectively. The mean absolute reduction of HbA1c at 6 months was -0.93% and -0.87% at 12 months. The percentage of patients that achieved ≥2%, 1-2% and 0.5-<1% HbA1c reductions were 16%, 28% and 21% at 6 months, respectively, and 17%, 33% and 11%, at 12 months, respectively. For the secondary outcome analyses, patients experienced a mean weight loss of 3.73 kg at 6 months, and 4.83 kg at 12 months. The percentage of patients that achieved ≥10 kg, 5-10 kg and 1-<5 kg weight reductions at 6 months were 13%, 25%, and 34%, respectively; and at 12 months, 16%, 22% and 41%, respectively.

CONCLUSION

Dulaglutide therapy was shown to be effective in reducing HbA1c and weight at 6 and 12 months of therapy in Malaysian patients with type 2 diabetes currently treated with at least two or more OGLDs, with or without insulin.

EP_A024

MINIMED™ 780G ADVANCED HYBRID CLOSED-LOOP SYSTEM IN TYPE 1 DIABETES DURING RAMADAN: A SINGLE CENTRE EXPERIENCE

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Gaayathri Krishnan and Vijiya Mala Valayatham
Endocrinology Unit, Medical Department, Putrajaya Hospital, Hospital

INTRODUCTION/BACKGROUND

The MiniMed™ 780G automated insulin delivery system has improved outcomes for people with type 1 diabetes. In Putrajaya Hospital, most patients with type 1 diabetes fall in the high-risk category and are advised to avoid fasting during Ramadan, yet many still choose to observe it.

METHODOLOGY

We aim to review the effectiveness and safety of the MiniMed™ 780G use during Ramadan. We report a prospective observational, single-centre study of Type 1 diabetes patients using the MiniMed™ 780G during Ramadan 2024. Four patients were selected and had their CareLink personal data extracted before and during Ramadan to examine safety and glycemic metrics. Changes were made to their pump settings when necessary.

RESULTS

All patients were able to fast for more days with the MiniMed™ 780G compared to previous years, with a mean of 13.5 days (8-20 days) on the pump vs 8.3 days (3-12 days) on basal-bolus insulin. All our patients demonstrated hyperglycemia after Iftar which needed 4-5 hours to resolve. Three of 4 patients developed hypoglycemia 1-4 hours before iftar requiring intervention. One patient developed one episode of severe hypoglycemia requiring hospitalization. No patients developed diabetic ketoacidosis. The average TIR was 72% before Ramadan and 70% during Ramadan.

CONCLUSION

The MiniMed™ 780 G increased the number of days of completion in fasting among our patients. However, incidences of hypoglycemia and hyperglycemia persisted requiring adjustments in the pump settings throughout Ramadan. This system allowed our patients to fast confidently and safely. Improvement in the outcome is to be expected with continuous experience in the future.

EP_A025

RECURRENT HYPOGLYCEMIA IN A TEENAGER WITH OBESITY: A CASE REPORT

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Lee Ryan MF, Mas Suria, Goh KG, Md Syazwan MA
Endocrinology Unit. Hospital Tengku Ampuan Afzan, Kuantan, Malaysia

INTRODUCTION

Reactive hypoglycaemia is a condition of postprandial hypoglycemia occurring within 2 to 5 hours after meal intake. This condition is characterised by inappropriately increased blood insulin levels due to pancreatic over-activity to carbohydrates, most often refined sugars, thus producing hypoglycaemic symptoms. Recent studies have shown that the prevalence of T2D in obese children and adolescents is 0.18–7.9%, which is five times that in normal-weight individuals.

CASE

This is a case of a 16-year-old female with a BMI of 34.28 kg/m^2 who presented with frequent symptoms of hypoglycaemia, mainly palpitations, sweating, giddiness and syncopal attacks since January 2023. The frequency of symptoms was noted 5 to 6 times per week, commonly occurring 4 hours post-meal and after strenuous activity.

She practices a heavy dietary intake 4 times per day with refined carbohydrates at each meal. Clinically, the patient exhibits signs of insulin resistance such as acanthosis nigricans. She underwent a mixed-meal tolerance test in November 2023 which showed no clinical and biochemical evidence of hypoglycaemia. Following that, continuous glucose monitoring was arranged for a week which showed hypoglycaemic episodes ranging from 3.5 to 3.9 mmol/L in the afternoon of one of the days. She was prescribed Acarbose but declined treatment due to gastrointestinal intolerance. She opted for a high fibre, low glycaemic index diet with frequent small meals which showed improvement of the symptoms.

CONCLUSION

Lifestyle modifications are the mainstay of management and prevention of the development of diabetes mellitus for patients with reactive hypoglycaemia. Furthermore, studies have shown that the addition of metformin or acarbose also plays a vital value in preventing reactive hypoglycaemia.

EP_A026

GLYCEMIC CONTROL AND BODY WEIGHT EFFECTS OF SGLT2 INHIBITORS (EMPAGLIFLOZIN 25 MG, EMPAGLIFLOZIN 12.5 MG AND DAPAGLIFLOZIN 10 MG) IN THE TREATMENT OF TYPE 2 DIABETES MELLITUS: A SINGLE CENTRE STUDY

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CP Su,[1] HJ Chai,[2] YS See,[2] R Sures Kumar[2]

[1]*Department of Internal Medicine and Endocrinology, Hospital Teluk Intan, Perak, Malaysia*

[2]*Department of Pharmacy, Hospital Teluk Intan, Perak, Malaysia*

INTRODUCTION/BACKGROUND

Sodium-glucose co-transporter 2 (SGLT2) inhibitors have emerged as promising therapeutic agents for the management of type 2 diabetes mellitus (T2DM), offering a novel mechanism of action that targets renal glucose reabsorption.

METHODOLOGY

This study investigates the glycaemic control and body weight effects of SGLT2 inhibitors, specifically empagliflozin 25 mg, empagliflozin 12.5 mg and dapagliflozin 10 mg, in the context of their availability within Hospital Teluk Intan. This is a cross-sectional study which involved patients who had been prescribed SGLT2 inhibitors for a duration exceeding one year. Inclusion criteria encompassed patients meeting the specified duration of SGLT2 inhibitor use, while exclusion criteria comprised individuals with less than one year of SGLT2 inhibitor therapy, those procuring SGLT2 inhibitors independently, those admitted within one year of commencing SGLT2 inhibitors and those lacking documented body weight data due to mobility constraints. Patient records were systematically reviewed to extract demographic details and pertinent clinical parameters, including pre- and post-initiation measurements of glycated haemoglobin (HbA1c), body weight and insulin dosage.

RESULT

The study included 24 patients taking dapagliflozin 25 mg, 14 patients on empagliflozin 12.5 mg and 3 patients on dapagliflozin 10 mg, all meeting the inclusion criteria with available data. Among those on empagliflozin 25 mg, there was no significant reduction in HbA1c or weight. In the empagliflozin 12.5 mg group, while HbA1c reduction was not significant, there was a notable decrease of 3.1 kg in body weight. Similarly, in the dapagliflozin 10 mg group, HbA1c reduction was not significant, but there was a weight reduction of 2.7 kg post-treatment.

Initial observations from the enrolled participants suggest significant improvements in body weight, indicating a potential benefit of SGLT2 inhibitors, particularly empagliflozin 12.5 mg and dapagliflozin 10 mg, in fostering weight loss among T2DM patients. However, further examination is necessary to determine the statistical significance of these results and understand the extent of the effect across various doses and types of SGLT2 inhibitors.

CONCLUSION

This study offers valuable insights into the impact of SGLT2 inhibitors, including empagliflozin and dapagliflozin, on glycaemic control and body weight management in T2DM patients. The findings highlight the potential of SGLT2 inhibitors in addressing weight concerns, albeit without significant effects on glycaemic control.