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.

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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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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.