EP_A046

AN OVERVIEW OF ADMISSIONS FOR HYPERGLYCAEMIC CRISES IN HOSPITAL SULTANAH AMINAH JOHOR BAHRU, MALAYSIA

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INTRODUCTION/BACKGROUND
Hyperglycaemic crises are metabolic emergencies that encompass diabetic ketoacidosis (DKA) and hyperglycaemic hyperosmolar state (HHS). Both are associated with increased healthcare expenditure, morbidity and mortality.

METHODOLOGY
We describe the clinical and socioeconomic characteristics of patients admitted for hyperglycaemic crises from 1st June 2023 to 31st March 2024 in our hospital. An endocrine team reviewed all admissions for hyperglycaemic crises during the period mentioned above. Patients' demographic and clinical information were collected as part of routine comprehensive patient evaluation. All data were analysed using GraphPad Prism Version 9.5.0 software.

RESULTS
There were 132 admissions for hyperglycaemic crises (129 DKA and 3 HHS), involving 110 patients (mean age 41.3 years, SD = 17.6; 51.8% female; 57.3% Malay, 20.9% Indian, 19.1% Chinese; 71.3% completed secondary education; 23.6% active smokers). Six patients were readmitted for DKA and one for HHS within 90 days from their index admissions within this period. Fifty-three (55.2%) had a household income of RM 2500 and below. Two-thirds had type 2 diabetes mellitus, while 29.1% had type 1 diabetes. Fifteen patients (13.6%) had DKA as their first presentation of diabetes. Infection was the most common precipitant of hyperglycaemic crises, comprising 60% of cases. Among 95 patients who had pre-existing diabetes, 54.7% had their follow-up at primary care, while 24.2% received care at our endocrine clinic. Forty percent did not conduct self-monitoring of blood glucose at all. Moreover, at least two-thirds of patients with established diabetes fared poorly in sick day rules knowledge assessment.

CONCLUSION
More efforts are needed to reinforce diabetes self-management education and support (DSMES) services at all levels of care to reduce the healthcare burden of hyperglycaemic crises.

EP_A047

MEDICATION PRACTICES AND IMPACT ON GLYCAEMIC OUTCOMES AMONG FASTING MUSLIM TYPE 2 DIABETES MELLITUS IN PRIMARY CARE CLINICS DURING RAMADAN

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INTRODUCTION/BACKGROUND
Ramadan fasting has been shown to affect glycaemic outcomes among those with Type 2 Diabetes Mellitus (T2DM) due to adjustment of oral antidiabetic medications (OHA) and insulin.

METHODOLOGY
This study investigates how medication practices affect glycated haemoglobin (HbA1c) levels, hypoglycaemia, hyperglycaemia and hospitalization rates among fasting Muslim T2DM patients in Petaling district, Malaysia. A prospective observational study was conducted in seven government primary healthcare clinics in the Petaling district from March 14 to July 15, 2022. A questionnaire on medication types, practices and outcomes was administered to patients. Pregnant women were excluded. Chi-square and logistic regression were used to determine the association between medication practices and glycaemic outcomes.

RESULTS
A total of 260 participants completed the study. In this study, 96.5% of participants were taking OHA; 41.5% were taking both insulin and OHA. Despite being counseled by healthcare providers (HCPs), 8.4% of participants had self-adjusted their OHAs, and 23.1% self-modified their insulin dose during Ramadan. Among those who adjusted OHAs, 2.2% stopped taking the medication, 6.9% decreased the dose and none increased the dose. For insulin users, 2.6% increased the dose, 9.1% reduced the dose and none discontinued the insulin. Chi-square showed a significant effect of self-adjustment of medication during Ramadan with hypoglycaemia (P = 0.046), with no significant association between self-adjustment of medication with HbA1c level (P = 0.48), hospitalization rate (P = 0.693), or hyperglycaemia (P = 0.757). However, logistic regression

did not show any significant association between self-adjustment of medication and hypoglycaemia ($P = 0.085$).

CONCLUSION

HCPs need to be aware and do close follow-ups among T2DM patients to prevent self-adjustment of medications during Ramadan. Self-adjustment of medication during Ramadan has no significant impact on glycaemic outcomes. Further studies are needed to explore other factors like medication adherence and dietary and lifestyle changes that may affect such outcomes.

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IMPACT OF ADVANCED CARBOHYDRATE COUNTING INTENSIVE PROGRAM IN TYPE 1 DIABETES THROUGH WHATSAPP-BASED MONITORING

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INTRODUCTION/BACKGROUND

Advanced carbohydrate counting is a meal planning method that allows better flexibility and glycaemic control. However, adopting and maintaining this nutritional therapy for long-term effectiveness can be highly challenging for individuals with type 1 diabetes (T1D).

METHODOLOGY

Using technology to facilitate patient access and offer real-time feedback, we aimed to assess the effectiveness of a multidisciplinary collaboration educational program known as the Advanced Carbohydrate Counting Intensive Program (ACCIP). This retrospective observational study involves T1D patients enrolled in ACCIP via a WhatsApp-based group monitoring from July 2020 to December 2022 in Hospital Queen Elizabeth II. The study included patients who could send food diary photographs and perform carbohydrate counting via WhatsApp Group for at least two meals a day for seven days. HbA1c measurements were recorded at initiation, 3-to-6 months and 9-to-12 months after the program ended.

RESULTS

The analysis included 62 patients with T1D who met the inclusion criteria. There were 22 (35.5%) men and 40 (64.5%) women. The median age of patients was 31.0 ± 10.2 years, with a median diabetes duration of 8.5 years ± 7.8 years and a median initial HbA1c of 9.2% ± 2.9. A total of 40 (64.5%) patients were able to maintain advanced carbohydrate counting (ACC) 12 months after the program ended. Overall, median HbA1c decreased significantly 3-to 6 months following the ACC intensive program (-1.1%, P <0.01). Reductions were maintained at 9-to-12 months but were not significant (-0.6%, $P = 0.086$). Subgroup analysis showed significant HbA1c reduction in patients who maintain ACC at 3 to 6 months (-1.5%, $P = 0.01$) and 9 to 12 months (-1.4%, $P = 0.02$).

CONCLUSION

Early and real-time intensive education in advanced carbohydrate counting via digital platforms may provide a long-term positive impact on glucose control. Larger clinical trials with structured programs are warranted to validate this positive impact.

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CEREBELLAR ATAXIA PRESENTING WITH LATE-ONSET AUTOIMMUNE DIABETES MELLITUS: A CASE REPORT

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INTRODUCTION/BACKGROUND

Glutamic acid decarboxylase antibodies (GAD-Ab) are the predominant autoantibodies present in most adult-onset autoimmune diabetes cases. Furthermore, high levels of GAD-Ab have been associated with neurological syndromes such as stiff person syndrome, cerebellar ataxia, epilepsy, limbic encephalitis and other overlapping syndromes. We present a patient who exhibited symptoms of cerebellar ataxia and new-onset diabetes mellitus

CASE

A 38-year-old female with a medical history of endometrial polyps presented with a one-month history of progressive gait instability and vertigo resulting in difficulty ambulating. She had also experienced polydipsia and polyuria for two weeks. Neurological examination revealed staccato speech and gait ataxia with bilateral dysmetria and dysdiadochokinesia. No nystagmus or diplopia was observed. Power and tone were normal, with hyperreflexia in the left bicep and patella. Her glucose level at presentation was 28.9 mmol/L with no ketoacidosis. Cranial MRI was unremarkable, and CSF analysis showed lymphocytic