include strengthening patient education and reinforcing guideline-based practice through regular CME sessions. However, a re-audit has not yet been conducted at the time of clinical audit reporting. An ongoing evaluation will be essential to determine the effectiveness and sustainability of these interventions in reducing preventable diabetic vision loss at PPAT Sungai Besi.

EP_A046

PREVALENCE OF THYROID DYSFUNCTION IN TYPE 2 DIABETES MELLITUS AND ITS ASSOCIATION WITH BODY FAT MASS INDEX

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INTRODUCTION
Type 2 diabetes mellitus (T2DM) and thyroid disorders are common endocrine conditions with a bidirectional relationship affecting glucose and lipid metabolism. Adiposity, particularly fat mass index (FMI), may influence thyroid function. but its association with thyroid dysfunction and glycemic control remains unclear, especially in Malaysia. This study aimed to determine the prevalence of thyroid dysfunction in T2DM and its association with glycemic control and FMI at Universiti Teknologi MARA (UiTM).

METHODOLOGY
A cross-sectional study was conducted among patients with T2DM attending the Endocrine Clinic, UiTM, from December 2025 to March 2026. A total of 91 participants aged 18–70 years were recruited using convenience sampling. Demographic, clinical, anthropometric, and laboratory data were collected. Thyroid dysfunction was defined as thyroid-stimulating hormone (TSH) <0.38 or >5.33 mIU/L. Body composition was assessed using the InBody 380 to determine FMI. Data were analyzed using SPSS version 30 with descriptive statistics and Pearson correlation.

RESULTS
The prevalence of thyroid dysfunction among patients with T2DM was 7.7% (7/91), predominantly with low TSH levels. Mean hemoglobin A1c (HbA1c) in the overall study population was 7.59 ± 1.49%, and mean TSH was 1.42 ± 0.95 mIU/L, within the euthyroid range. Mean FMI was 11.95 ± 5.23 kg/m², exceeding normal ranges for both men (3–6 kg/m²) and women (5–9 kg/m²). FMI showed a positive correlation with TSH level (r = 0.379, p <0.001), indicating that higher adiposity was associated with higher TSH levels despite remaining within the euthyroid range. Pearson correlation showed a weak, non-significant negative correlation between HbA1c and TSH (r = −0.127, p = 0.229).

CONCLUSION
The prevalence of thyroid dysfunction among patients with T2DM in our cohort was relatively low at 7.7%. However, the significant correlation between FMI and TSH level, even within the euthyroid range, suggests that adiposity may exert a clinically relevant influence on thyroid function.

EP_A047

REAL-WORLD CONTINUOUS GLUCOSE MONITORING PATTERNS IN MALAYSIAN ADULTS WITH TYPE 2 DIABETES: A SINGLE-CENTRE STUDY

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INTRODUCTION
Malaysia has one of the highest diabetes prevalence rates in Asia (1 in 5), with >50% fail to achieve optimal glycemic control. Continuous glucose monitoring (CGM) provides detailed insights beyond hemoglobin A1c (HbA1c), capturing daily glucose fluctuations and variability. Real-world data describing CGM patterns and their clinical associations in Malaysian adults with type 2 diabetes mellitus (T2DM) are limited.

METHODOLOGY
This cross-sectional study analyzed CGM data from 25 Malaysian adults with T2DM, standardized over 14 days. CGM metrics included time in range (TIR), time above range (TAR), time below range (TBR), mean glucose, and coefficient of variation (CV). Weekday–weekend comparisons were performed, and correlations with age, diabetes duration, HbA1c, body mass index (BMI), treatment regimen, and complications were assessed.

RESULTS
Participants had a mean age of 56.2 ± 13.2 years (52% male), mean HbA1c 9.4 ± 2.7%, diabetes duration 10.7 ± 9.0 years, and BMI 29.8 ± 9.4 kg/m². Mean TIR, TAR, TBR, mean glucose, and CV were similar between weekdays and weekends (p >0.34 for all). TIR >70% was achieved by 52% of participants on weekdays and 48% on weekends, with no statistically significant difference (p = 0.75). Longer diabetes duration correlated with lower TIR (r = −0.62, p

<0.001), higher mean glucose (r = 0.58, p = 0.002), and greater variability (r = 0.54, p = 0.004). Older age was associated with lower TIR (r = −0.48, p = 0.014) and higher mean glucose (r = 0.44, p = 0.025). Higher HbA1c correlated with lower TIR (r = −0.36, p = 0.04), higher TAR (r = 0.35, p = 0.05), greater variability (r = 0.51, p = 0.006), and increased target organ damage (ϱ = 0.55, p = 0.004). BMI was not associated with TIR (r = −0.18, p = 0.38). Participants with ≥2 complications had lower TIR (55.8 ± 28.4% vs 76.7 ± 19.2%, p = 0.073), while insulin therapy was associated with higher TBR (r = 0.42, p = 0.03).

CONCLUSION

In Malaysian adults with T2DM, CGM metrics were similar between weekdays and weekends, indicating lifestyle differences had minimal impact on glycemic control. Longer diabetes duration, older age, higher HbA1c, multiple complications, and insulin therapy identified patients at highest risk for poor glycemic control, greater variability, and hypoglycemia. These findings support the use of CGM for risk stratification, individualized monitoring, and therapy optimization to reduce complications and hypoglycemia risk.

EP_A048

EUGLYCEMIC DIABETIC KETOACIDOSIS: CLINICAL INSIGHTS FROM A TERTIARY-CENTRE COHORT

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INTRODUCTION

Euglycemic diabetic ketoacidosis (EDKA) is an uncommon but potentially life-threatening complication of diabetes, characterized by significant ketoacidosis in the absence of marked hyperglycemia. The increasing use of sodium-glucose co-transporter-2 inhibitors (SGLT2i) has contributed to its rising incidence; however, data describing its clinical spectrum remain limited.

METHODOLOGY

We conducted a retrospective observational study of 19 patients admitted for EDKA between 2002 and 2025. EDKA was defined as metabolic acidosis with ketosis in the presence of blood glucose <11 mmol/L. Demographic characteristics, comorbidities, biochemical parameters, triggers, and clinical outcomes were analyzed. Continuous variables were reported as mean (SD) or median (interquartile range [IQR]), and categorical variables as frequencies and percentages.

RESULTS

The cohort displayed a mean age of 52 (SD 22.2) years, with a slight female predominance (52.6%). The majority had underlying type 2 diabetes mellitus (89.5%). Other comorbidities include hypertension (63.2%) and chronic kidney disease (31.6%). Despite severe metabolic derangement, the mean blood glucose at presentation was modest at 9.3 (SD 3.38) mmol/L. Median pH was 7.1 (IQR 0.35) and bicarbonate 9.1 mmol/L, with a markedly elevated median anion gap of 25.3 mmol/L.

SGLT2i exposure was identified in 47.4% of patients, predominantly empagliflozin, with most initiated within 6 months. Nevertheless, infection was still the leading precipitant (68.4%), while 31.6% were adjudicated as having SGLT2i as the primary precipitating factor, probably due to underreporting during the diagnosis. Nearly half of the patients required intensive care (47.4%). The mean time to DKA resolution was 19 (SD 10.1) hours. Overall outcomes were favorable, with 89.5% of patients discharged and a mortality rate of 10.5%.

CONCLUSION

EDKA presents with severe metabolic acidosis despite deceptively normal glucose levels, increasing the risk of delayed recognition. Early assessment of ketones and acid–base status is essential in patients with diabetes presenting with unexplained metabolic acidosis, particularly among those receiving SGLT2 inhibitors, to facilitate timely diagnosis and management.

EP_A049

AUDIT OF STAFF KNOWLEDGE OF HYPOGLYCEMIA MANAGEMENT IN A DISTRICT HOSPITAL

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INTRODUCTION

Hypoglycemia, a frequent and potentially life-threatening consequence of anti-diabetic therapy, remains a major barrier to optimal glycemic control. Effective inpatient management depends on frontline staff knowledge and preparedness; thus, knowledge gaps may compromise patient safety. This audit evaluated staff knowledge of hypoglycemia management in a district hospital in Malaysia to identify areas for improvement.