EP_A044

GLYCEMIC AND METABOLIC OUTCOMES OF GLP-1 RECEPTOR AGONISTS IN TYPE 2 DIABETES: A SINGLE-CENTRE CLINICAL AUDIT

Shinye Eng[1] and Rabeah Md Zuki[1]
[1]Hospital Sultan Abdul Halim

INTRODUCTION
Glucagon-like peptide-1 receptor agonists (GLP-1 RAs) improve glycemic control, promote weight loss, reduce insulin requirements, and confer cardiometabolic benefits in type 2 diabetes mellitus (T2DM). This audit evaluated glycemic and metabolic outcomes of GLP-1 RAs in T2DM patients at a single-centre diabetes clinic.

METHODOLOGY
This audit included T2DM patients who initiated GLP-1 RAs between January 2022 and March 2025 at Hospital Sultan Abdul Halim. Primary outcomes were changes in hemoglobin A1c (HbA1c), body weight, and body mass index (BMI) at 3 and 12 months. Secondary outcomes included percentage weight loss, changes in systolic blood pressure (SBP), insulin total daily dose (TDD), low-density lipoprotein (LDL) cholesterol, gastrointestinal adverse effects, and treatment discontinuation.

RESULTS
Sixteen patients were included; median age was 58.5 years (interquartile range [IQR] 47.5–65), and 56.3% were female. Median diabetes duration was 15 years (IQR 11.5–20.3). Median HbA1c decreased from 9.7% (IQR 8.6–10.4) at baseline to 8.8% (IQR 7.7–9.1) at 3 months and 7.8% (IQR 7.0–8.5) at 12 months. Body weight decreased from 88.1 kg (IQR 79.5–122.1) at baseline to 85.0 kg (IQR 75.9–113.7) at 3 months and 82.0 kg (IQR 74.8–117.3) at 12 months. BMI decreased from 37.8 kg/m² (IQR 31.7–47.1) to 37.3 kg/m² (IQR 30.7–45.5) at 3 months and 36.0 kg/m² (IQR 30.1–45.6) at 12 months.

At 12 months, weight loss was 5.8% (IQR 3.0–8.0), with 56.5% achieving >5% weight reduction. In all, 93.8% achieved >1% HbA1c reduction. Mean SBP decreased by 10 ± 20 mmHg, LDL cholesterol 0.29 mmol/L (IQR -0.77 to 0.07), and insulin TDD 8 units/day (IQR -13 to 10). No gastrointestinal adverse effects reported. Three patients (18.8%) discontinued treatment due to excessive weight loss, treatment plateau, and limited drug availability.

CONCLUSION
From our single-centre experience, the observed improvements in glycemic and metabolic outcomes support the benefits of GLP-1 RAs in managing T2DM.

EP_A045

A CLINICAL AUDIT OF DIABETIC RETINOPATHY SCREENING AMONG TYPE 2 DIABETES MELLITUS PATIENTS ATTENDING PUSAT PERUBATAN ANGKATAN TENTERA, SG BESI

Maizatulilfah Miskan[1], Hasliza Abu Hassan[1], Ng Kien Keat[1], Ambigga Devi[1], Aida Jaffar[1], Siti Salmiah Awang[2]
[1]Department of Primary Care Medicine, Faculty of Medicine and Defence Health, National Defence University of Malaysia
[2]Pusat Perubatan Angkatan Tentera Sg. Besi

INTRODUCTION
Diabetic retinopathy (DRP) is the most common microvascular complication of diabetes, affecting approximately 30% of patients with type 2 diabetes and over half of those with type 1 diabetes. It remains a leading cause of preventable blindness among adults worldwide. Early stages are frequently asymptomatic, making regular diabetic eye screening essential to detect sight-threatening changes before irreversible vision loss occurs. In Malaysia, where diabetes prevalence has reached 15.6% among adults (NHMS 2023), the effective implementation of annual retinal screening is crucial. Malaysian National Clinical Practice Guidelines recommend an annual retinal screening among type 2 diabetes mellitus (T2DM) patients. This clinical audit evaluated adherence to DRP screening.

METHODOLOGY
A retrospective clinical audit was conducted at Pusat Perubatan Angkatan Tentera (PPAT), Kem Sungai Besi, to evaluate compliance with national DR screening standards among adults with T2DM. Thirty eligible patient records were reviewed. Three key indicators were assessed: (1) documentation of visual acuity at diagnosis, (2) annual fundoscopy, and (3) referral for fundus photography within the preceding 12 months. Performance was benchmarked against the 80% standard. Data were analyzed descriptively.

RESULTS
The median age group was 55–59 years, with equal gender distribution. Screening adherence was substantially below target: visual acuity assessment at diagnosis, 23.3%; annual fundoscopy, 26.7%; and fundus imaging referral, 36.7%. All screening indicators were below the recommended standard.

CONCLUSION
This audit reveals a significant implementation gap between national guidelines and routine practice. Structured workflow integration and documentation reinforcement strategies need to be emphasized. Additional measures

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

Nabilah Farhana Hamidi[1], Nur Aini Eddy Warman[1], Rohana Abdul Ghani[1], Xin Wee Chen[2]
[1]Endocrine Unit, Faculty of Medicine, Universiti Teknologi MARA (UiTM)
[2]Department of Public Health, Faculty of Medicine, Universiti Teknologi MARA

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

Ryan Jia Xian Koh[1], Siti Nabilah Atiqah Othman[2], Maszariffah Mashor[2], Azni Abdul Latif[2], Ooi Chuan Ng[1]
[1]Faculty of Medicine & Health Sciences UPM
[2]Department of Medicine, Hospital Sultan Abdul Aziz Shah UPM

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