two, and three relapses, respectively). Overall mortality was 17% (22/131), with markedly higher mean HbA1c in deceased patients compared to survivors (16.0% vs 10.5%).

CONCLUSION

Poor glycemic control at TB diagnosis is associated with delayed sputum conversion, prolonged treatment duration, and increased mortality. These findings are consistent with regional evidence, including a South Asian systematic review (Gautam et al., 2021), demonstrating higher mortality and treatment failure in patients with TB and DM. Early and aggressive optimization of glycemic control, alongside standard anti-TB therapy, is essential to improve outcomes.

EP_A035

RISK STRATIFICATION AND REFERRAL PATTERNS FOR METABOLIC LIVER DISEASE IN TYPE 2 DIABETES: REAL-WORLD FIB-4 UTILIZATION

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INTRODUCTION

Metabolic dysfunction–associated steatotic liver disease (MASLD) is common among patients with type 2 diabetes (T2D) and increases the risk of cirrhosis, yet fibrosis often remains clinically silent until hepatic decompensation occurs. Current diabetes guidelines recommend non-invasive fibrosis risk stratification, such as the fibrosis-4 index (FIB-4), during routine diabetes care, but real-world adoption remains unclear. This study aimed to evaluate the implementation of FIB-4 as a risk stratification tool in patients with T2D.

METHODOLOGY

This was a retrospective study of consecutive patients with T2D who were seen in the Diabetes Clinic of University of Malaya Medical Centre in 2023. Patients were identified as having a higher risk of future cirrhosis based on elevated FIB-4 ≥1.3.

RESULTS

The data for 1,009 patients were analyzed, median age 62 (52–71) years, 40.7% male. Elevated FIB-4 was seen in 28.8% (291/1,009). Only 12.0% (35/291) with elevated FIB-4 were referred for further hepatology evaluation, whereas 3.3% (24/718) with low FIB-4 were referred. Among the patients with elevated FIB-4, those referred were more likely known to have hepatic steatosis, had higher alanine aminotransferase, aspartate aminotransferase, gamma-glutamyl transferase, and lower low-density lipoprotein cholesterol and platelet count. Over a median follow-up of 1.71 (0.99–1.95) years, totaling 1,440 person-years, two liver-related events (0.2%) occurred (one each in the elevated and low FIB-4 group, respectively). Sixteen patients (4.0%) experienced cardiovascular events, including one patient (0.6%) in the elevated FIB-4 group and 15 (2.9%) in the low FIB-4 group.

CONCLUSION

Despite automated FIB-4 reporting, this risk stratification tool was underutilized in T2D, resulting in missed opportunities for early identification and management of more severe liver disease. Integration of FIB-4 into diabetes care workflows, alongside structured referral pathways and clinician education, may improve early detection and reduce long-term hepatic complications in T2D.

EP_A036

REAL-WORLD CLINICAL EXPERIENCE OF SUBCUTANEOUS SEMAGLUTIDE IN PUBLIC HOSPITAL-BASED DIABETES CARE: A RETROSPECTIVE OBSERVATIONAL STUDY

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INTRODUCTION

Subcutaneous once-weekly semaglutide (Sema-OW) (0.5, 1.0 mg) has been available in Malaysia since 2020, but is currently not listed in the MOH Medicines Formulary. MOH clinicians prescribe Sema-OW for limited patient numbers, on a "named patient basis" following a closely regulated application process, permitting use once multilevel approval is obtained. Our study aims to report on the glycemic and weight-lowering outcomes of Sema-OW in a real-world MOH clinical setting.

METHODOLOGY

A retrospective, single-arm, observational study was conducted in Hospital Putrajaya and Hospital Kuala Lumpur. The study population comprised adults with type 2 diabetes mellitus (T2DM) treated with Sema-OW for at least 6 months with hemoglobin A1c (HbA1c) and weight parameters available in their medical records. The primary endpoint was HbA1c change at 6 months. The secondary endpoints were the changes in HbA1c and weight from baseline to 12 months, proportion of patients achieving HbA1c <7%, and different levels of HbA1c reduction in 6 and 12 months (<0.5, 0.5–<1.0, 1–<2, ≥2%). Changes in concomitant glucose-lowering medications were additionally observed.

RESULTS

The cohort comprised 45 patients, with a mean age and disease duration of 53.3 and 16.3 years, respectively. Baseline mean weight was 100.3 kg, and body mass index (BMI) was 36.8 kg/m², with 88% in the obese BMI category. Baseline HbA1c was 7.9%, and HbA1c reduction was 0.74% at 6 months and 0.84% at 12 months. The proportions of patients achieving HbA1c reduction of <0.5, 0.5–<1.0, 1.0–<2.0, and ≥2.0% were 8.9, 26.7, 26.7, and 8.9%, respectively. The mean weight reduction from baseline was 4.93 kg at 6 months and 6.73 kg at 12 months. Concomitant insulin therapy was observed in 44%, with 31% reduction in total daily insulin requirement at the end of the study, along with simplification of insulin regimens.

CONCLUSION

Combination therapy with Sema-OW improved glycemic control with weight loss and enabled treatment deintensification in people with T2DM in Malaysian public tertiary diabetes care.

EP_A037

IMPACT OF GLYCEMIC BURDEN ON RENAL FILTRATION DECLINE AND PROTEINURIA IN TYPE 1 DIABETES MELLITUS

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INTRODUCTION

Diabetic nephropathy is a major complication of type 1 diabetes mellitus (T1DM) and a leading cause of end-stage renal disease. This study aims to correlate long-term glycemic control and disease duration with renal decline, measured via estimated glomerular filtration rate (eGFR) and urinalysis proteinuria.

METHODOLOGY

A retrospective cohort study was conducted among 15 patients with T1DM at Hospital Bentong. Independent variables were 3-year mean glycated hemoglobin A1c (HbA1c) and duration of diabetes. Dependent variables included the change in eGFR derived from baseline and latest serum creatinine (calculated using the CKD-EPI 2021 equation), and the shift in urine protein severity, mapped to an ordinal scale, over a 3-year follow-up. Multivariate linear regression and Spearman's rank correlation were utilized for analysis.

RESULTS

The cohort consisted of 5 male patients and 10 female patients with a mean initial presentation HbA1c of 11.4%, a mean 3-year HbA1c of 9.15%, and a median disease duration of 11 years. Baseline eGFR was preserved (mean 117.15 mL/min/1.73 m²). Regression analysis revealed that for every 1% increase in mean HbA1c, eGFR declined significantly by 9.6 mL/min/1.73 m² (p = 0.002). Furthermore, each additional year of disease duration independently reduced eGFR by 1.1 units (p = 0.008). Spearman validation confirmed the strong negative correlation between HbA1c and eGFR (Rho = -0.664, p = 0.006). Conversely, the correlation between 3-year mean HbA1c and worsening proteinuria was not statistically significant (Rho = -0.067, p = 0.827), and patient gender did not significantly impact progression (p = 0.129).

CONCLUSION

Poor long-term glycemic control and longer duration of diabetes mellitus are strong independent predictors of decline in functional glomerular filtration in T1DM. While worsening proteinuria may not be detected during a short 3-year window using a standard urinalysis (UFEME), a more sensitive test such as Urine Albumin-to-Creatinine Ratio may better detect early structural kidney damage.

EP_A038

CLINICAL AND BIOCHEMICAL CHARACTERISTICS OF ADULT DIABETIC KETOACIDOSIS: T1DM VS T2DM

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INTRODUCTION

The rising incidence of diabetic ketoacidosis (DKA) in type 2 diabetes mellitus (T2DM) represents a paradigm shift from its traditional recognition as a hallmark complication of type 1 diabetes mellitus (T1DM). However, contemporary data comparing clinical presentation, precipitating factors, and outcomes between these two populations remain limited.

METHODOLOGY

In this retrospective observational study, all adult DKA admissions with T1DM or T2DM at a tertiary centre between 2001 and 2025 were studied. DKA was defined according to standard biochemical criteria. Electronic medical records