RESULTS

A total of 31 participants were recruited; 18 completed the study (11 intervention, 7 placebo). The cohort was predominantly elderly (median age 68 ± 12 years), male (51.6%), with long-standing diabetes (mean duration of 18.6 ± 8.2 years), and a mean hemoglobin A1c of 7.3 ± 0.6%. A statistically significant reduction in TCSS score was observed in the intervention arm (5.5 ± 3.8 vs 3.3 ± 3.4; $p = 0.002$), indicating improvement in neuropathic symptom severity in this chronic population. The SF MPQ scores showed a downward trend in both arms, but were not statistically significant. Among intervention participants who completed sural NCS, three patients demonstrated normalization, and five showed partial amplitude gains, indicating directional improvement in nerve function. Four patients with normal baseline studies exhibited further amplitude gains. Otherwise, limited improvements were observed in those with abnormal conduction velocity parameters. Bionerv E+ was well tolerated, with only mild and self-limiting adverse events reported.

CONCLUSION

Short-term supplementation with Bionerv E+ showed improvement in neuropathic symptoms among long-standing diabetic patients. However, longer-term studies with larger cohorts are necessary to determine its effects on patients with DSPN.

EP_A032

EFFICACY AND SAFETY OF SGLT2 INHIBITORS IN ELDERLY (≥75 YEARS) WITH TYPE 2 DIABETES: A REAL-WORLD STUDY

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INTRODUCTION

Sodium-glucose-linked-transporter inhibitors (SGLT2-i) have demonstrated cardiovascular and renal benefits in type 2 diabetes mellitus (T2DM), but patients aged ≥75 years remain underrepresented in major trials, creating uncertainty regarding their risk–benefit profile. Real-world data show mixed safety signals. In Malaysia, local evidence is limited despite a growing elderly diabetic population. This study evaluates the glycemic efficacy and safety of SGLT2-i in advanced elderly patients in a real-world public hospital setting.

METHODOLOGY

We conducted a retrospective observational cohort study of patients aged ≥75 years with T2DM initiated on SGLT2-i in Hospital Putrajaya (2020–2024). Electronic records were reviewed for demographics, comorbidities, medications, and biochemical parameters. Outcomes at 6–12 months assessed glycemic control and safety. Adverse events and discontinuation rates were recorded. Patients with incomplete data, type 1 diabetes, active malignancy, or severe renal impairment were excluded.

RESULTS

A total of 104 patients (mean age 78.2 years; 54% female) were included with a high proportion (76.9%) classified as at high cardiovascular risk due to established macrovascular disease (57.7%) or nephropathy (53.8%). Indications for SGLT2-i initiation were glycemic control alone (69.2%) and together with cardiorenal protection (58.7%). Glycemic control remained stable (hemoglobin A1c: 7.66–7.45%; $p = 0.076$), with preserved renal function (estimated glomerular filtration rate: 58.65–58.11 mL/min/1.73 m^2; $p = 0.575$). Overall safety was favorable, with 90.4% experiencing no adverse events. Minor adverse events included urinary tract infections (2.9%) and polyuria (1.9%). ASCVD-related hospitalizations occurred in 4.8% of patients, with a low discontinuation rate (7.7%). A statistically significant weight reduction was observed (baseline 66.67 kg, −1.01 kg; $p = 0.005$) but was not clinically significant. Proteinuria improvement was noted in 15.7% of patients.

CONCLUSION

SGLT2-i are safe and well-tolerated in elderly T2DM patients (≥75 years), with stable glycemic control, preserved renal function, and minimal adverse events, supporting their use in very elderly Asian populations.

EP_A033

EXTREME GLYCEMIC SEVERITY AND MORTALITY RISK IN THE TB-DM CO-PANDEMIC: A RETROSPECTIVE ANALYSIS OF CLINICAL OUTCOMES

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INTRODUCTION

Tuberculosis patients with comorbid diabetes face a substantially higher risk of mortal outcomes. The "meta-inflammation" loop between hyperglycemia and tubercu-

losis (TB) infection exacerbates systemic severity and increases hazard rates for death. This study aims to quantify the association between baseline hemoglobin A1c (HbA1c) levels and all-cause mortality within a Malaysian cohort.

METHODOLOGY

This was a retrospective cross-sectional audit analyzing 131 adult TB-DM (diabetes mellitus) patients during their treatment course (2022–2025) in the TB Clinic, Hospital Sungai Buloh. Primary outcomes were all-cause mortality and clinical severity, stratified by baseline HbA1c and diabetes mellitus DM treatment modality (OHA vs. insulin).

RESULTS

The overall mortality rate was 17% (22/131). A stark disparity in glycemic control was observed between survivors and deceased patients: those who died presented with extreme mean HbA1c levels of 16.0%, compared to 10.5% in survivors. High HbA1c was also associated with a higher prevalence of pulmonary involvement compared to extrapulmonary disease (10.9% vs 8.9%). Patients requiring insulin therapy experienced significantly higher mortality rates compared to those managed on OHAs, with 25% (12 out of 47) patients requiring insulin therapy having died during TB treatment, compared to only 8.2% (7 out of 84) patients in the OHA-only group.

CONCLUSION

Baseline HbA1c is a critical prognostic marker that identifies a high-risk "lethal threshold" at extreme glycemic levels (HbA1c ≥16). Furthermore, the nearly fourfold increase in death risk among insulin-treated patients likely reflects a high-risk phenotype of advanced metabolic failure, which corresponds with a study done in Kelantan (Siti Rohana et al., 2020). The study shows that TB patients with DM had three times higher risk of developing unsuccessful TB treatment outcomes compared to TB patients without DM. Collectively, these data necessitate mandatory early HbA1c screening and aggressive metabolic management to reduce the staggering mortality of this dual epidemic.

EP_A034

IMPACT OF GLYCEMIC CONTROL ON TUBERCULOSIS TREATMENT OUTCOMES IN PATIENTS WITH DIABETES MELLITUS: A RETROSPECTIVE AUDIT

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INTRODUCTION

Diabetes mellitus (DM) is a significant comorbidity associated with adverse tuberculosis (TB) treatment outcomes and remains an ongoing clinical challenge. Chronic hyperglycemia impairs host immune responses, particularly macrophage function, leading to delayed bacillary clearance. This contributes to poorer outcomes, including delayed sputum conversion, prolonged treatment duration, relapse, and increased mortality. Poor glycemic control is a key modifiable factor influencing these outcomes. This study aimed to evaluate the impact of glycemic control at diagnosis on TB treatment outcomes in a Malaysian cohort.

METHODOLOGY

A retrospective cross-sectional audit was conducted using the TB clinic registry at Hospital Sungai Buloh from 2022 to 2025. Adult patients (≥18 years) with confirmed TB (any form) and DM (Type 1 or Type 2) with complete records were included. Of 241 patients screened, 131 were included after exclusions due to incomplete records (29.9%), transfer (29.9%), loss to follow-up (19.9%), and drug-resistant TB (2.9%). Data collected included demographics, hemoglobin A1c (HbA1c) at diagnosis, sputum conversion duration, treatment duration, type of DM therapy, and clinical outcomes.

RESULTS

The cohort had a mean age of 53 years, with 97% having Type 2 DM.

Mean HbA1c at diagnosis was 10.5%. Poorer glycemic control was associated with delayed sputum conversion. Patients who achieved sputum conversion by 8 weeks had an average HbA1c of 9.6%, compared to 11.8% in those with delayed conversion. Longer treatment duration was associated with higher HbA1c (mean 10.5, 8.6, and 11.8% for 6-, 12-, and 18-month regimens, respectively). Relapse analysis demonstrated a trend towards higher HbA1c with increasing relapse episodes (11.2, 13.75, and 14.5% for one,