to delay initiation, de-intensify, or temporarily discontinue insulin therapy in patients with Type 2 Diabetes (T2D), prioritising oral glucose-lowering drugs. Reduced insulin use may have compromised glycaemic control, increasing the risk of acute complications. This study aims to estimate the direct medical costs of hospitalisations for acute hyperglycaemic events in a district hospital.

METHODOLOGY

Adult patients admitted to Hospital Jempol with acute T2D complications – uncontrolled diabetes (UD), diabetic ketoacidosis (DKA), and hyperosmolar hyperglycaemic state – linked to insulin discontinuation from September 1, 2024, to February 28, 2025, were identified. An activity-based micro-costing approach was applied to quantify resource utilisation through medical records review. Cost components included ward stays, diagnostic procedures, laboratory investigations, pharmaceuticals, and consumables. Unit costs were sourced locally. Mean per-event costs were estimated for each complication type and expressed in 2025 Malayan Ringgits (RM).

RESULT

Twelve patients (mean age ± SD: 62.8±8.3) with hospitalisations temporally linked to insulin discontinuations were identified, including 10 UD and 2 DKA cases, with total costs of RM61,877. The median length of stay (LOS) for UD was 4 days (range: 1-11), and it was longer for DKA (6-11 days). The mean cost per UD admission was RM3,637 ± 2,200 (RM1,763-8,753), while DKA admissions were more costly (RM6,108-19,398). Higher costs are correlated with longer stays. Daily mean costs were RM918 (±309) for UD, and RM1,391±527 for DKA. Procedures and laboratory investigations were the largest cost drivers (62.3%), followed by ward stays (25.2%), and inpatient drugs/consumables (12.4%).

CONCLUSION

Inpatient management of acute hyperglycaemic events is resource intensive. This study provides unit cost estimates for UD and DKA admissions, which, when combined with nationwide LOS data, can assess the financial impact of the insulin shortage on the MOH.

EP_A207

CLINICAL CONSEQUENCES OF INSULIN DEPRESCRIBING IN TYPE 2 DIABETES: INSIGHTS FROM A DISTRICT HOSPITAL IN MALAYSIA

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INTRODUCTION

Type 2 diabetes (T2D) is characterised by insulin resistance and progressive beta-cell dysfunction, leading to failure on oral glucose-lowering drugs (OGLDs). Insulin deprescribing requires individualisation, considering factors like residual beta-cell function, disease duration and insulin dosage. This study explores the characteristics and outcomes of patients with T2D who had insulin deprescribed at a local health clinic before hospitalisation.

METHODOLOGY

We performed a retrospective medical records review involving adult patients with T2D admitted to Hospital Jempol from September 2024 to April 2025. These patients had their insulin deprescribed within 12 months prior to admission. Basic demographics, Charlson Comorbidity Index (CCI), baseline HbA1c, admission random blood glucose (RBS), interval from insulin discontinuation to admission, length of stay (LOS) in the ward, insulin deprescribing success (OGLDs maintained at discharge) and factors favoring deprescribing were explored.

RESULT

Among 14 patients with a median age of 62.6 years (range: 41-78), 85.7% had a CCI ≥3. All had OGLDs with insulin (basal bolus 71.4% or premixed 28.6%), with median total daily dose (TDD) of 57 units (range: 28-98) pre-admission. Duration of insulin discontinuation to admission was 3-31weeks. Median baseline HbA1c was 11.5% (range: 6.4-14%), while median admission RBS was 19.6mmol/L (range: 6.8 – 31 mmol/L). Infections accounted for 57% of them, in which 5 were complicated (2 DKA, 1 respiratory failure, 1 gram-negative bacteremia, 1 septic shock and intubated). Other indications for admission included symptomatic hyperglycemia (28.6%), decompensated heart failure (7.1%), and hypertensive emergency (7.1%). The

median LOS was 4 days (range: 1–11). 28.6% transitioned successfully to OGLDs while 71.4% resumed de-intensified insulin regime. Successful deprescribing was noted in older patients (median: 68 vs 64; *p*-value 0.178), patients with lower baseline HbA1c (median: 8.7 vs 12; *p*-value 0.288) and higher RBS (median: 20.4 vs 18.2 mmol/L, *p*-value=1.00).

CONCLUSION

Although statistically insignificant, lower HbA1c may favour deprescribing success. These preliminary trends may inform future studies on safer deprescribing practices to prevent adverse outcomes and hospitalisations.

EP_A208

DIABETES REMISSION POST-BARIATRIC SURGERY: A SABAH PERSPECTIVE

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INTRODUCTION

Bariatric surgery is not only effective for weight loss but also improves obesity-related complications, including inducing diabetes remission. We aimed to investigate the effects of bariatric surgery on diabetes remission in our centre.

METHODOLOGY

We conducted an observational retrospective study of patients with type 2 diabetes who underwent bariatric surgery (Laparoscopic Sleeve Gastrectomy, Laparoscopic Sleeve Gastrectomy with Proximal Jejunal Bypass, Roux-en-y Gastric Bypass or Mini Gastric Bypass) between March 2022 and February 2024 at Queen Elizabeth Hospital 2. We gathered data on the patients' preoperative weight, body mass index (BMI), HbA1c, antidiabetic medications, diabetes duration, postoperative weight loss and percentage total weight loss (%TWL). Diabetes remission at 1-year post-surgery was defined as having an HbA1c of <6.3% without antidiabetic medications.

RESULT

Thirty-five patients were recruited with mean preoperative weight of 122.0±23.2 kg, BMI of 47.0±7.5 kg/m^2, HbA1c 7.7±1.7%, and median diabetes duration of 4.38 years (range 0.3-19.9). Average postoperative weight loss at 1 year was 34.7±13.6 kg with mean %TWL of 27.8±7.6%. Diabetes remission was achieved in 17 patients (49%). Factors significantly associated with remission were shorter diabetes duration (median 1.92 years [IQR: 1–4.5], *p* <0.001) and absence of insulin use (Crude OR 4.8, 95% CI: 1.1–20.1). No significant associations were found for preoperative HbA1c, BMI, type of surgery, or %TWL. Multivariate analysis identified diabetes duration as the sole independent predictor of remission.

CONCLUSION

Our findings support the effectiveness of bariatric surgery in achieving diabetes remission in patients with obesity, aligning with evidence from the STAMPEDE trial and DiaRem score studies. Shorter diabetes duration emerged as the strongest predictor of remission, while the types of surgery were of comparable benefit. Longer-term follow-up is warranted to assess the durability of remission.

EP_A209

ACUPUNCTURE AS AN ADJUNCT THERAPY FOR INSULIN RESISTANCE IN TYPE 2 DIABETES: A RANDOMIZED CONTROLLED TRIAL

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INTRODUCTION

Type 2 diabetes (T2D) remains a major global health challenge, including in Malaysia. Pharmacological treatments often face issues such as poor adherence and clinical inertia. This study aimed to evaluate the effects of acupuncture on insulin resistance in patients with T2D

METHODOLOGY

Forty-six patients with T2D were recruited and randomized into either the acupuncture group or the placebo control group. Both groups received 10 sessions of acupuncture therapy using press needles or placebo needles applied to the abdominal area over a period of six weeks, while continuing their standard T2D treatment regimen. Insulin resistance, measured by HOMA-IR, was assessed at baseline and post-intervention. Adverse events were monitored at every visit. The trial adhered to The Consolidated Standards for Reporting of Trials Statement (CONSORT) reporting guideline.

RESULT

The mean age was 55.67 ± 9.41 years, and the mean duration of diabetes was 7.58 ± 5.85 years. Acupuncture significantly reduced insulin resistance by 31.74% (mean HOMA-IR 4.12 ± 1.08) compared to the placebo control group, which