

## Adult E-Poster

### EP\_A175

#### EXPLORING THE IMPACT OF INSULIN DEINTENSIFICATION ON BODY WEIGHT AND GLUCOSE CONTROL IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

<https://doi.org/10.15605/jafes.040.S1.183>

Nur Aflyn Fatinah Faizal,<sup>1,2</sup> Ernieda Md Hatah,<sup>1</sup>  
Sarah Anne Robert,<sup>3</sup> Yeap Yoon See,<sup>2</sup> Afifah  
Azhari,<sup>2</sup> Noorlita Adam<sup>4</sup>

<sup>1</sup>Faculty of Pharmacy, University Kebangsaan Malaysia, Kuala Lumpur, Malaysia

<sup>2</sup>Department of Pharmacy, Hospital Tuanku Ja'afar, Seremban, Malaysia

<sup>3</sup>Department of Pharmacy, Hospital Canselor Tuanku Mukhriz UKM, Kuala Lumpur, Malaysia

<sup>4</sup>Department of Endocrine, Hospital Tuanku Ja'afar, Seremban, Malaysia

#### INTRODUCTION

Deintensification of insulin regimens and doses has potential to prevent overtreatment and hypoglycemia. This study aims to identify the characteristics and reasons for deintensification in Type 2 Diabetes Mellitus (T2DM) patients; to evaluate glycemic efficacy and to examine changes in body weight following deintensification and factors influencing these outcomes.

#### METHODOLOGY

A retrospective cohort observational study was conducted among T2DM patients from Hospital Tuanku Ja'afar and Hospital Canselor Tuanku Mukhriz. Data were collected from patient records receiving insulin deintensification from January 2020 to January 2024 using a data collection form with six sections.

#### RESULT

A total of 134 patients from two hospitals were included in this study, with 75 patients from HTJ and 59 patients from HCTM. The mean age was  $57.25 \pm 14.02$  years, with an equal distribution of male and female participants. The majority were Malay ( $n = 69, 51.5\%$ ), followed by an equal number of Chinese and Indian ( $n = 32, 23.9\%$  each), with most patients on a basal bolus regimen ( $n = 69, 51.5\%$ ), followed by a premixed ( $n = 63, 47\%$ ) and a basal ( $n = 2, 1.5\%$ ). The mean duration of diabetes was  $17.54 \pm 8.28$  years. Baseline HbA1c was  $9.38 \pm 1.86\%$  and most patients used insulin four times a day ( $n = 59, 44\%$ ). The mean total daily insulin dose decreased from  $77.99 \pm 30.18$  units to  $60.11 \pm 25.39$  units. Hypoglycemia events reduced from 98 to 11 episodes. The main reason for deintensification was hypoglycemic events ( $n = 98, 73.1\%$ ). HbA1c reduced from  $9.38 \pm 1.86\%$  to  $8.72 \pm$

$1.78\%$  ( $t(133) = 5.57, p < 0.001$ ), and weight decreased from  $77.27 \pm 15.83$  kg to  $75.80 \pm 15.75$  kg ( $t(133) = 6.19, p < 0.001$ ). Factors significantly associated with changes in HbA1c include baseline HbA1c ( $p < 0.001$ ), use of basal-only insulin ( $p = 0.002$ ), and reduction in insulin injection frequency by one ( $p = 0.002$ ) and two ( $p = 0.004$ ) times per day.

#### CONCLUSION

Insulin deintensification significantly improves glycemic control and reduces body weight in T2DM patients. Key factors influencing these improvements include baseline HbA1c levels and the type and frequency of insulin used. Monitoring for signs of overinsulinization and hypoglycemia, particularly those with high HbA1c, is crucial for optimizing diabetes management.

### EP\_A176

#### THE PREVALENCE OF COGNITIVE IMPAIRMENT AMONG ADULTS WITH TYPE 2 DIABETES MELLITUS: A MULTI-CENTER CROSS-SECTIONAL STUDY

<https://doi.org/10.15605/jafes.040.S1.184>

Mohd Fyza Bahrudin and Noor Raffhati Adyani  
Abdullah

Endocrine Unit, Medical Department, Hospital Sultanah Bahiyah, Kedah, Malaysia

#### INTRODUCTION

Cognitive impairment is increasingly recognized as a significant complication of type 2 diabetes mellitus (T2DM), affecting memory, executive function, and processing speed. Despite its clinical relevance, cognitive impairment in T2DM often remains underdiagnosed, leading to poor disease management, reduced adherence to treatment, and diminished quality of life.

#### METHODOLOGY

This cross-sectional study evaluated the prevalence of cognitive impairment among T2DM patients attending the Medical Outpatient Department (MOPD) and Integrated Diabetes Clinic at Hospital Sultanah Bahiyah and Hospital Sultan Abdul Halim, Kedah. Eligible participants were adults with T2DM, selected through convenience sampling. Cognitive function was assessed using the Montreal Cognitive Assessment (MoCA), and demographic data were collected.

#### RESULT

A total of 144 participants were included, comprising 88 females (61.1%) and 56 males (38.9%). The median age of participants was 56 years old. The majority were of

## Adult E-Poster

Malay ethnicity (n = 125, 86.8%), followed by Indian (n = 14, 9.7%), Chinese (n = 4, 2.8%), and Thai (n = 1, 0.7%). Most participants (n = 90, 62.5%) were from low-income backgrounds. Educational attainment was limited, with 16% having no formal education or only primary-level education. Cognitive function assessment revealed that only 49 participants (34%) had normal cognitive function, while 72 participants (50%) exhibited mild cognitive impairment. Moderate cognitive impairment was observed in 21 participants (14.6%), and severe cognitive impairment was identified in 2 participants (1.4%).

### CONCLUSION

This study reveals a strikingly high prevalence of cognitive impairment among individuals with T2DM, underscoring an urgent need for early detection and proactive intervention. As cognitive decline directly influences disease self-management, medication adherence, and overall quality of life, its integration into routine diabetes care is imperative.

## EP\_A177

### TREATMENT OF DYSLIPIDEMIA IN TYPE 2 DIABETES MELLITUS PATIENTS AT THE DIABETES CLINIC, HOSPITAL SULTAN HAJI AHMAD SHAH: A CLINICAL AUDIT

<https://doi.org/10.15605/jafes.040.S1.185>

**Teo Jin An, Lau Chia Hui, Nur Aziera binti Suhaimi, Nurul Athirah binti Hamzah, Saiful Shahrizal Shudim, See Chee Keong**

*Hospital Sultan Haji Ahmad Shah Temerloh, Pahang, Malaysia*

### INTRODUCTION

Dyslipidemia is a major risk factor for cardiovascular disease in patients with Type 2 Diabetes (T2D) and requires aggressive management. The aim of this clinical audit is to assess the appropriateness of dyslipidemia treatment in T2D patients attending the diabetes clinic at Hospital Sultan Haji Ahmad Shah, Temerloh, Pahang.

### METHODOLOGY

All T2D patients attending the diabetes clinic from June to July 2024 were included in this clinical audit. Electronic medical records were reviewed for demographic data, comorbidities, lipid profiles, cardiovascular disease risk assessments, and statin prescription patterns.

### RESULT

A total of 102 patients were included, with a mean age of 53.2 years, 55.9% being female, and 59.8% having a diabetes duration of more than 10 years. The majority of patients had high to very high cardiovascular risk. Among the patients,

37.3% had chronic kidney disease and 32.4% had ischemic heart disease. The LDL-C control at the latest follow-up was suboptimal, with a mean LDL-C of 2.71 mmol/L. Additionally, 33.3% of patients were not initiated on the appropriate statin intensity, and 12% did not receive any lipid-lowering therapy. 20% of patients were on high doses of atorvastatin (60-80 mg), with limited use of combination therapy. Despite recognizing the patients' cardiovascular risk, there was clinical inertia in intensifying treatment.

### CONCLUSION

This clinical audit highlights weaknesses in adherence to clinical guidelines and clinical inertia in dyslipidemia treatment. There is a greater need for continuous education and a stronger emphasis on achieving treatment goals in the management of T2D patients. Additionally, a reassessment of the budget for the availability of combination therapy options is necessary.

## EP\_A178

### OBESITY TREATMENT: IMPACT OF BLOOD GLUCOSE, LIPID AND NON-ANTIOBESITY DRUGS ON MUSCLE MASS

<https://doi.org/10.15605/jafes.040.S1.186>

**Ooi Chuan Ng, Barakatun-Nisak MY, Zubaidah NH, Firdaus Mukhtar, Thanalactchumy Chandrabose, Sarah Syahmina Daud**

*Universiti Putra Malaysia, Selangor, Malaysia*

### INTRODUCTION

While obesity is often linked to excess muscle mass, emerging data reveal a paradoxical relationship between metabolic parameters and sarcopenia. This study examines the interplay between blood glucose regulation, lipid metabolism, and muscle mass retention in metabolic obesity.

### METHODOLOGY

A cross-sectional study was conducted at Hospital Sultan Abdul Aziz Shah (HSAAS), Serdang, Selangor, to identify factors influencing muscle mass changes in metabolic obesity. Adults ( $\geq 18$  years) with BMI  $\geq 27$  kg/m<sup>2</sup> and at least two comorbidities were included, while those with bariatric surgery or conditions causing intentional weight loss were excluded. Clinical data, including BMI, metabolic parameters, and medication use, were collected. Sample size was determined using a correlation formula.

### RESULT

Among 35 individuals (BMI  $\geq 26.5$  kg/m<sup>2</sup>), hyperglycemia (HbA1c  $> 6.5\%$ ) and hypertriglyceridemia ( $\geq 1.7$  mmol/L) correlated with muscle loss, whereas normoglycemia