

CONCLUSION

Bariatric surgery was associated with clinically meaningful reductions in both SBP and DBP, with similar improvement patterns observed across demographic and metabolic subgroups. These findings support the effectiveness of bariatric surgery as a strategy for blood pressure reduction and cardiovascular risk management in patients with obesity.

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A SINGLE-CENTRE MALAYSIAN COHORT STUDY ON PREDICTORS OF GLYCEMIC IMPROVEMENT 12 MONTHS AFTER BARIATRIC SURGERY

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INTRODUCTION

Bariatric surgery is an established intervention for obesity and its metabolic complications, including diabetes mellitus. However, most studies are from Western populations with limited data in Malaysia. This study evaluated glycemic status improvements and identified predictors of hemoglobin A1c (HbA1c) reduction at 12 months following bariatric surgery to contribute regional data to Southeast Asia.

METHODOLOGY

This retrospective analysis included 110 patients who underwent bariatric surgery between 2015 and 2025. Pre- and post-operative parameters, including HbA1c, body mass index (BMI), and lipid profiles, were collected at 1, 3, 6, 9, and 12 months and evaluated as potential predictors of glycemic status improvement at 12 months. Univariate analysis followed by stepwise multivariate linear regression was performed to identify predictors of HbA1c improvement at 12 months. Regression coefficients (B), 95% confidence intervals, and *p*-values were reported.

RESULTS

The mean age was 40.5 years with a mean baseline BMI of 43.49 kg/m²; 58% were female. At baseline, 60.9% (*n* = 67) had diabetes, 30.9% (*n* = 34) prediabetes, and 8.2% (*n* = 9) normal HbA1c. In univariate analysis, baseline HbA1c (*B* = 0.579, *p* < 0.001), age (*B* = -0.051, *p* = 0.034), and sex (*B* = 1.123, *p* = 0.044) were significantly associated with HbA1c change. In multivariate analysis, the final model identified baseline HbA1c, BMI difference at 12 months, and TG difference at 12 months as independent predictors of HbA1c

change. Baseline HbA1c was the strongest predictor (*B* = 0.857, *p* < 0.001) indicating that higher baseline HbA1c was associated with greater change over time. BMI difference at 12 months was also significantly associated with HbA1c change (*B* = 0.046, *p* = 0.016), indicating that greater weight loss contributed to improved glycemic control. Similarly, TG difference at 12 months was a significant predictor (*B* = 0.337, *p* = 0.023). The model explained 86.8% of the variation in HbA1c change (adjusted *R*² = 0.868).

CONCLUSION

Bariatric surgery resulted in significant weight loss and improvement in glycemic status at 12 months, with baseline HbA1c, BMI differences, and TG reductions emerging as key predictors of glycemic improvement in a Malaysian cohort.

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REAL-WORLD EFFECTIVENESS OF SEMAGLUTIDE IN ADULTS WITH OBESITY AND TYPE 2 DIABETES IN A MALAYSIAN DISTRICT HOSPITAL

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INTRODUCTION

Semaglutide has shown clinically meaningful effects on weight and glycemic control in randomized trials, but real-world evidence from Malaysian public healthcare settings remains limited. Local data are particularly relevant because access to glucagon-like peptide-1 receptor agonists may be influenced by cost and availability. We evaluated the real-world effectiveness of once-weekly semaglutide in adults with obesity and type 2 diabetes mellitus (T2DM) managed in routine clinical practice at a Malaysian district hospital.

METHODOLOGY

We conducted a retrospective observational study of adults with obesity and T2DM treated with once-weekly semaglutide at a single district hospital. Demographic, anthropometric, metabolic, and cardiovascular parameters were collected at baseline and follow-up. The primary outcomes were percentage weight change and the proportions of patients achieving at least 5% and at least 10% weight loss. Secondary outcomes included changes in body mass index (BMI), glycated hemoglobin A1c (HbA1c), blood pressure, lipid parameters, and insulin requirements. Paired analyses were performed to compare pre-treatment and post-treatment values.

RESULTS

Eight patients were included (mean age 45 years; 63% women; 88% Malay). All had T2DM and hypertension, while most had dyslipidemia. Mean baseline weight was 116.0 ± 22.7 kg, and mean BMI was 43.5 ± 9.0 kg/m². After a mean treatment duration of 23 months, mean weight decreased to 102.9 ± 23.8 kg, representing a mean reduction of 13.1 kg or 11.5%. Six patients (75%) achieved at least 5% weight loss, and four (50%) achieved at least 10% weight loss. Mean BMI decreased to 38.4 ± 8.4 kg/m². Mean HbA1c improved from $8.9 \pm 1.9\%$ to $6.3 \pm 0.9\%$. Systolic and diastolic blood pressure declined from 153 ± 22 to 134 ± 17 mmHg and from 91 ± 17 to 82 ± 10 mmHg, respectively. Total cholesterol, low-density lipoprotein cholesterol, and triglycerides also improved. Among insulin-treated patients, all discontinued insulin during follow-up. No treatment discontinuations due to adverse effects were recorded.

CONCLUSION

In this small real-world cohort, semaglutide was associated with meaningful weight loss, improved glycemic control, favorable cardiometabolic changes, and successful insulin deintensification. These findings support its use in routine obesity-diabetes care, although larger prospective studies are needed.

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EFFECTIVENESS OF GLP-1 RECEPTOR AGONISTS ON WEIGHT LOSS IN MALAYSIAN PATIENTS WITH TYPE 2 DIABETES

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INTRODUCTION

Glucagon-like peptide-1 receptor agonists (GLP-1 RAs) induce clinically meaningful weight reduction in patients with type 2 diabetes mellitus (T2DM), but real-world data in Southeast Asian populations are limited. This study evaluated the effectiveness of GLP-1 RAs in achieving clinically significant weight loss in Malaysian patients with obesity and T2DM.

METHODOLOGY

A retrospective cohort study was conducted among adults with T2DM and obesity attending the Endocrinology Clinic at Hospital Sultan Abdul Aziz Shah between January 2023 and December 2024. Patients receiving GLP-1 RAs (semaglutide or liraglutide) were compared with those on standard care. Anthropometric outcomes were assessed over 6–12 months, with weight loss thresholds of ≥ 3 , ≥ 5 , and $\geq 10\%$. Between-group comparisons used Fisher's exact test, and odds ratios (OR) were calculated.

RESULTS

Eighty-five patients were included (GLP-1, $n = 47$; control, $n = 38$). The GLP-1 group achieved significantly higher rates of any weight loss (70.0% vs 41.2%; OR = 3.33, $p = 0.019$) and $\geq 3\%$ weight loss (42.5% vs 14.7%; OR = 4.29, $p = 0.011$). Number needed to treat was 3–4 patients. Proportions achieving ≥ 5 and $\geq 10\%$ weight loss were higher in the GLP-1 group but did not reach statistical significance.

CONCLUSION

GLP-1 RA therapy significantly improves the likelihood of clinically meaningful weight loss in Malaysian patients with obesity and T2DM. These findings support the integration of GLP-1 RAs into routine obesity management strategies in Southeast Asia.