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POSTER COMMUNICATION · VISCERAL & DIGESTIVE SURGERY

A single-centre study on the transformative impact of bariatric surgery on metabolic health in Malaysia

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KEY MESSAGES

1. Bariatric surgery significantly reduces body weight, BMI, and waist circumference in Malaysian patients.
2. Metabolic parameters including glycaemic control, lipid profiles, and blood pressure improve significantly after bariatric surgery.
3. This study provides important regional evidence supporting bariatric surgery as an effective intervention for obesity-related metabolic diseases in Southeast Asia.

ABSTRACT

Introduction. Metabolic diseases such as obesity, type 2 diabetes, hypertension and dyslipidemia significantly contribute to the global public health burden. Bariatric surgery leads to substantial improvements in obesity and other metabolic diseases but most studies are based on Western populations. Limited research has been conducted in Southeast Asia to evaluate bariatric surgery efficacy in the Malaysian context. This study assesses the outcome of bariatric surgery in a single-centre Malaysian cohort to provide valuable data supporting bariatric surgery for obesity-related metabolic issues in Southeast Asia.

Materials and methods. This retrospective observational study was conducted at the Advanced Laparoscopy & Diabesity Surgical Centre, KPJ Damansara Specialist Hospital. It included 116 patients who underwent bariatric surgery between 2015 and 2025. Inclusion criteria were metabolic syndrome defined by at least ≥ 3 NCEP ATP III criteria including abdominal obesity, elevated triglycerides, low HDL cholesterol, hypertension and elevated fasting blood glucose. Metabolic parameters were recorded pre-operatively and at 1, 3, 6, 9 and 12 months postoperatively. Parameters included body weight, BMI, waist circumference, fasting glucose, HbA1c, blood pressure, triglycerides, HDL and LDL. Longitudinal changes were analyzed using mixed-effects repeated-measures models with post-hoc pairwise comparisons over 12 months.

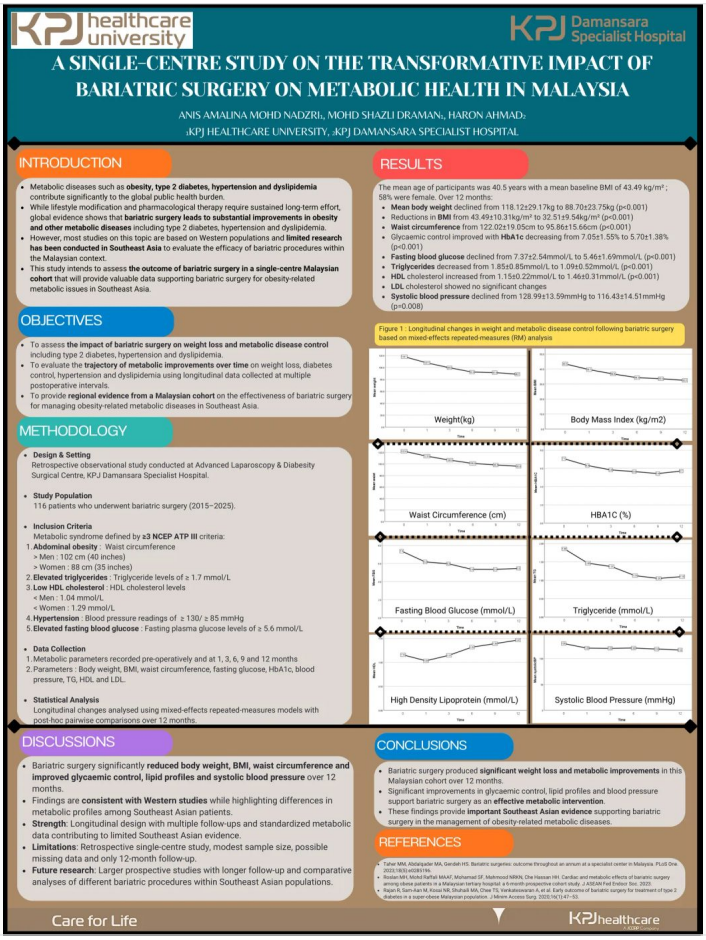
Results. The mean age of participants was 40.5 years with a mean baseline BMI of 43.49 kg/m^2;58% were female. Over 12 months, mean body weight declined from 118.12±29.17kg to 88.70±23.75kg ($p<0.001$). Reductions in BMI from 43.49±10.31kg/m^2 to 32.51±9.54kg/m^2 ($p<0.001$). Waist circumference from 122.02±19.05cm to 95.86±15.66cm ($p<0.001$). Glycaemic control improved with HbA1c decreasing from 7.05±1.55% to 5.70±1.38%($p<0.001$). Fasting blood glucose declined from 7.37±2.54mmol/L to 5.46±1.69mmol/L ($p<0.001$). Triglycerides decreased from 1.85±0.85mmol/L to 1.09±0.52mmol/L ($p<0.001$). HDL cholesterol increased from 1.15±0.22mmol/L to 1.46±0.31mmol/L ($p<0.001$). LDL cholesterol showed no significant changes. Systolic blood pressure declined from 128.99±13.59mmHg to 116.43±14.51mmHg ($p=0.008$).

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ABSTRACT (CONTINUED)

Conclusion. Bariatric surgery produced significant weight loss and metabolic improvements in this Malaysian cohort over 12 months. Significant improvements in glycaemic control, lipid profiles and blood pressure support bariatric surgery as an effective metabolic intervention. These findings provide important Southeast Asian evidence supporting bariatric surgery in managing obesity-related metabolic diseases.

POSTER



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