

**PP\_A004****IMPACT OF METABOLIC SURGERY ON CARDIOMETABOLIC RISK FACTORS IN OBESE PATIENTS WITH TYPE 2 DIABETES, PREDIABETES AND NORMOGLYCAEMIA**

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**INTRODUCTION**

Metabolic surgery has shown promising results in managing obesity-associated conditions, including type 2 diabetes mellitus (T2DM). Despite its efficacy, its impact on obese individuals at different stages of T2DM remains underexplored, particularly in Malaysia. This study aimed to assess the effect of bariatric surgery on cardiometabolic risk factors in obese patients and compare outcomes among patients with T2DM, prediabetes, and without diabetes over 12 months.

**METHODOLOGY**

This study included 86 obese patients from various centres in Klang Valley, Malaysia, who underwent metabolic surgery procedures such as laparoscopic sleeve gastrectomy, Roux-en-Y gastric bypass, mini-gastric bypass, and one-anastomosis gastric bypass. They were stratified into three groups based on baseline HbA1c measurements according to Malaysia's CPG of Management of Type 2 Diabetes Mellitus 6th Edition: no diabetes (n = 42), prediabetes (n = 25), and diabetes (n = 19). Changes in weight, HbA1c, lipid profiles, and liver function markers (ALT, AST, and GGT) were evaluated at 6 and 12 months. Postoperative changes in cardiometabolic risk factors were analysed using the generalized estimating equations.

**RESULT**

The patients were mostly female (67.4%) and Malay (65.3%), with a mean age of  $39.0 \pm 7.7$  years and a mean BMI of  $39.7 \pm 8.1$  kg/m<sup>2</sup>. Significant improvements were observed in weight, HbA1c, HDL-C, triglycerides, AST, ALT, and GGT levels after 12 months across all groups ( $p < 0.05$ ), with the diabetes group showing the most substantial improvement in most variables. Comparison between groups highlighted significant differences in mean HbA1c and TG levels between the diabetes and prediabetes groups compared to the normoglycemia group ( $p < 0.01$ ).

**CONCLUSION**

Metabolic surgery improves cardiometabolic risk factors in obese patients, particularly in those with T2DM. Its potential benefits extend to individuals at high risk of developing diabetes, underscoring the need for further research to assess their eligibility for surgical intervention.