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The Effect of Intensive Lifestyle Intervention on Glycaemia, Body Mass Index and Lipid Profile in Overweight and Obese Women with Prediabetes and History of Gestational Diabetes Mellitus: A Randomized Controlled Trial

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Raja Nurazni RA, Nurain MN, Norzalinah J, Wan Muhd Ihsan

Hospital Putrajaya, Putrajaya, Malaysia

INTRODUCTION

Gestational diabetes mellitus (GDM) has been associated with increased risk for future diabetes mellitus. Due to high risk of progression to Type 2 diabetes mellitus (T2DM), postpartum care is very important. Intensive lifestyle intervention with physical activity and dietary intervention has proven to reduce or prevent T2DM in the future.

METHODOLOGY

This is a randomized controlled trial involving women with prediabetes and previous GDM. 22 subjects were randomized to either intensive lifestyle intervention (ILI) or standard medical care (SMC). The study duration was 6 months. Blood parameters were taken at baseline. Patients in ILI group received consultation including dietary and exercise intervention at baseline (0 month), 3 months and 6 months with monthly phone consultation and regular session via WhatsApp and emails. Subjects in SMC were seen at baseline (0 month), 3 months and 6 months and received standard health care advice. At 6 months, all subjects' weight were assessed and repeat blood test including OGTT, HbA1c and lipid profile were done.

RESULTS

A total of 21 subjects were included with 13 subjects in the ILI group and 8 subjects in the SMC group. One subject was excluded due to pregnancy. At baseline, all subjects in both groups had Impaired Glucose Tolerance (IGT) and Class I Obesity. Most of the baseline characteristics were the same in both groups except HDL-C and HbA1c. At 6 months, 46% of subjects in ILI group returned to euglycaemia while in SMC group, only 25% of subjects were euglycaemic. Changes in BMI and lipid parameters were not significantly different in both groups after 6 months.

CONCLUSION

Our result showed ILI resulted in higher percentage of subjects returning to euglycaemia compared to SMC. However, BMI and lipid changes were not significantly different when comparing both groups.