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DETERMINANTS OF POLYCYSTIC OVARIAN SYNDROME AMONG ADOLESCENTS WITH OVERWEIGHT AND OBESITY: A CASE-CONTROL STUDY PROTOCOL

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INTRODUCTION

Polycystic ovarian syndrome (PCOS) is a complex endocrine disorder that significantly affects adolescent girls, particularly those with overweight or obesity. However, data examining the determinants and metabolic profiles of PCOS among adolescents with overweight and obesity remain limited, especially in Malaysia. This protocol describes a case-control study investigating the cardiometabolic, dietary, and psychosocial determinants of PCOS among adolescents with overweight and obesity.

METHODOLOGY

This study is designed as a case-control study involving adolescent girls aged 13–16 years with a body mass index z-score $\geq +1$ standard deviation. Cases are defined

as adolescent girls with a confirmed diagnosis of PCOS based on the recommendations of the 2017 International Consortium of Paediatric Endocrinology (ICPE), while controls are those who do not meet the diagnostic criteria for PCOS. A total sample size of 440 participants is required. Participants will be recruited from 22 secondary schools selected from a list of schools in Kuala Lumpur. Data on sociodemographic characteristics, psychosocial health, physical activity, and dietary intake will be collected using structured questionnaires. Blood samples will be obtained and analyzed for diagnostic testing (free testosterone), exclusion tests (thyroid-stimulating hormone, follicle-stimulating hormone, luteinizing hormone, estradiol, prolactin, and dehydroepiandrosterone sulfate), and biochemical parameters (liver function tests, lipid profile, hemoglobin A1c, fasting glucose, fasting insulin, and inflammatory markers).

RESULTS

The study is expected to generate comprehensive data on the cardiometabolic, dietary, and psychosocial determinants of PCOS among adolescents with overweight and obesity. The findings will inform early screening strategies and targeted interventions aimed at reducing long-term reproductive and cardiometabolic complications.

CONCLUSION

This protocol outlines a structured approach to investigating PCOS in adolescence and addresses current gaps in early identification and risk stratification among high-risk populations.

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BASELINE PHYSICAL ACTIVITY ENHANCES GLP-1 RECEPTOR AGONIST WEIGHT LOSS IN OBESE MALAYSIAN PATIENTS WITH T2DM

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INTRODUCTION

While Glucagon-like peptide-1 receptor agonists (GLP-1 RAs) are effective for weight reduction in type 2 diabetes mellitus (T2DM), interindividual variability exists. Lifestyle factors, particularly baseline physical activity, may modify weight loss outcomes. This study examined whether baseline activity influences GLP-1 RA efficacy in Malaysian patients.