Adult Oral Presentation

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METABOLICALLY HEALTHY OBESITY AND ASSOCIATED RISK FACTORS AMONG MALAYSIAN ADULTS

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INTRODUCTION

Metabolically Healthy Obese (MHO) describes the subset of people with obesity (PwO) who do not exhibit overt cardiometabolic abnormalities, namely dysglycaemia, dyslipidemia or hypertension. While Malaysia has one of the highest obesity rates regionally, prevalence of MHO is unclear. This study aims to investigate the local prevalence of MHO among PwO and predisposing factors to Metabolically Unhealthy Obesity (MUO).

METHODOLOGY

Subjects were recruited at Universiti Malaya Medical Centre (UMMC) via convenience sampling. Healthcare workers in UMMC with no known chronic metabolic conditions were invited to participate and were included if their BMI was 23 kg/m^2 and above. Data collected on demographics, anthropometric measurements, bioimpedance analysis (BIA), and a fasting blood sample for glucose and lipid metrics were collected. The subjects were classified as MHO if no metabolic abnormalities were detected, and otherwise as MUO. Statistical analysis was done using SPSS Version 25.

RESULT

Two hundred ninety-seven subjects were recruited. Mean age was 36.26 ± 7.37 years, majority were female (71.00%) and Malay (90.20%). Overall, 172 (57.9%) were classified as MHO. Males were more likely to be MUO, X^2 (1, N=297) =4.09, p = 0.05. The MUO subgroup, compared to MHO subgroup, had significantly higher weight [median=77.65 (IQR:19.15) kg versus 70.55 (14.91) kg; p<0.01], BMI [30.10 (6.00) kg/m^2 versus 26.80 (4.67) kg/m^2, p <0.01], waist [94.40 (4.02) cm versus 90.50 (10.00) cm, p<0.01] and hip [105.40 (5.70) cm versus 101.90 (10.38) cm, p <0.01] circumferences, and waist-to-height ratio (WHtR) [0.59 (0.09) versus 0.56 (0.07), p<0.01] but not waist-to-hip ratio [0.89 (0.11) versus 0.86 (0.09), p >0.05]. On BIA, MUO subgroup had higher body fat percentage (BFP) [42.40 (11.32) % versus 39.90 (9.87) %, p <0.01] and Fat Mass Index (FMI) [12.75 (5.72) kg/m^2 versus 10.65 (4.20) kg/m^2, p <0.01]. After adjusting for age, gender, WHtR, BMI and BFP, neck circumference remained a significant predictor for MUO status [Odds Ratio = 1.16 (95%CI 1.02-1.31), p = 0.01].

CONCLUSION

A large proportion of PwO have MUO. High neck circumference is an independent predictor of MUO status among PwO and should prompt early screening for metabolic disturbances.