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Abdominal Obesity and High-sensitivity C-reactive Protein Level among Malay Obese Adults in Kuantan, Malaysia

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Abstract

Introduction: Abdominal obesity and inflammation are two independent risk factors for cardiovascular disease. However, the inter-relationship between these two factors among Malay population is fragmented. The purpose of this study is to determine the association between waist circumference as a measure of abdominal obesity and high-sensitivity C-reactive protein as an indicator of inflammation status among Malay obese adults in Kuantan, Pahang. Materials and Methods: Ninety-three apparently healthy obese adults (BMI between 27.5 and 39.9 kg/m²) aged between 20 to 62 years old were recruited in this study (68% men and 32% women). Circumference tape was used to measure the waist circumference and fasting venous blood was obtained to determine the high-sensitivity C-reactive protein level. Results: On average, the waist circumference of obese men and women was 103 cm (SD = 8.7) and 94 cm (SD = 7.0), respectively. The median (IQR) of the hs-CRP level of the study participant was 3.80 mg/L (1.5, 10.1). The Kendall's Tau correlation reveals that there is a significant positive linear correlation between waist circumference and hs-CRP level in obese men ($r(30) = 0.355, p = 0.006$) and women ($r(63) = 0.177, p = 0.043$). Conclusion: There is a significant inter-relationship between waist circumference and hs-CRP level among apparently healthy obese adults in Kuantan, Pahang. This study suggests that assessment of hs-CRP level is beneficial to predict the risk for future cardiovascular disease event and facilitate the management of obesity in this population. A prospective clinical study is recommended to confirm the findings.

Keywords

Author Keywords: [obesity](#); [inflammation](#); [adults](#)

KeyWords Plus: [CARDIOVASCULAR-DISEASE](#); [METABOLIC SYNDROME](#); [RISK](#); [INFLAMMATION](#); [PREVENTION](#); [GENDER](#); [CRP](#)

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