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Association between Hs-CRP and other Cardiovascular Risk Factors with Blood Pressure in Young Adults

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Abstract

INTRODUCTION: Hypertension remains the leading preventable risk factor for premature mortality and morbidity worldwide. The use of high-sensitivity C-reactive protein (hs-CRP) as the global risk prediction assessment for cardiovascular diseases (CVD) in asymptomatic individuals suggests the possibility that higher hs-CRP, or subclinical inflammation, maybe one of the causal factors contributing to an increased risk of CVD in young hypertensive patients. Most studies of hypertension and hs-CRP association were conducted regionally, whereby most of the participants were Caucasians with age beyond 40 years old. Studies of this association among young adults in Asian populations are lacking, therefore, a generalization of data might be limited to certain ages and populations only. MATERIALS AND METHOD: This comparative cross-sectional study analysed the association between hs-CRP and other cardiovascular risk factors with three different blood pressure statuses categorised into Normotensive (NT), Pre-hypertensive (PHT), and Hypertensive (HPT) groups among young adults in Kuantan, Pahang, Malaysia. RESULTS: Independendy, the association was significant only in males and subjects with parental history of hypertension in the prehypertensive group. However, in the hypertensive group, the relationships were significant not only in males and individuals with parental histories of hypertension but also in obese subjects. Hs-CRP was not associated with blood pressure status in the present study. CONCLUSION: The hypothesis that hs-CRP has an independent association with blood pressure status was not demonstrated in the present study. However, the observed association between circulating hs-CRP and blood pressure status is likely to be driven by confounders namely age, gender, genetic factors , and BMI status.

Author keywords

Cardiovascular Risk Factors ; High sensitivity C-Reactive Protein; Hypertension; Young adult

SciVal Topics

Metrics

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