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## FACTORS RELATED TO ARTERIAL STIFFNESS AND HIGH SENSITIVITY C REACTIVE PROTEIN: A COMPARISON BETWEEN HYPERTENSIVE AND NORMOTENSIVE URBAN MALAYSIAN MEN

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### Background:

The prevalence of hypertension, which is a major risk factor of cardiovascular disease (CVD) is increasing in Malaysia. Arterial stiffness and high sensitivity C reactive protein (hs-CRP) are also known predictors of CVD morbidity and mortality. The aims of this study were to compare these two parameters between hypertensive and normotensives urban Malaysian men and to investigate their associations with other cardiovascular risk factors.

### Materials and Methods:

Hundred and seventy six normotensive and 208 hypertensive men aged 40 to 80 years old resided around Kuala Lumpur were recruited. Measurements included heart rate (HR), pulse wave velocity (PWV), body mass index (BMI), high sensitivity C-reactive protein (hs-CRP), total cholesterol (TC), triglyceride (TG), high density lipoprotein (HDL), low density lipoprotein (LDL), total cholesterol/HDL ratio (TC/HDL), peripheral and central blood pressure (BP). Data were analyzed using SPSS version 16 and significance level was set at  $p < 0.05$ .

### Results:

HR, PWV, BMI, hs-CRP, peripheral and central BP were significantly higher in hypertensives compared to the normotensives. Other variables such as TC, TG, HDL, LDL and TC/HDL were comparable among the two groups. In hypertensive group, there were significant positive correlation between PWV and age, HR, peripheral systolic BP and central systolic BP, and between hs-CRP and HR, BMI, TC, TG, LDL and TC/HDL. In normotensive group, significant positive correlation was observed between PWV and age and central systolic BP, while hs-CRP positively correlated with HR, BMI, TG, and TC/HDL. In both groups, there were negative correlation between HDL and PWV and hs-CRP.

### Conclusion:

Arterial stiffness and hs-CRP are significantly higher in hypertensive group. In both groups, these parameters have significant positive correlation with other major cardiovascular risk factors.

### Keywords:

Arterial stiffness, hs-CRP, cardiovascular risk.