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## Prehypertensive State, Mild Hypertension, Metabolic Syndrome and Cardiovascular Risk Factors among Young Adults in Rural Malaysia

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### Abstract

Introduction: Prehypertension precedes overt hypertension and has been acknowledged by many guidelines. Hypertension is an important risk factor for cardiovascular disease in Malaysia. Hypertension prevalence is at 42.6% and population-based control is poor at 26.8%. The objective of the study is to ascertain the cardiovascular risk profile of prehypertensive and mildly hypertensive young adults against age-matched controls in rural Malaysia. Methods: 484 (four hundred and eighty four) subjects attending primary care clinic were screened. 91 (Ninety one) young adults with pre/mild hypertension and normotensive, age-matched controls were enrolled. The blood pressure and biochemical profiles for both groups were assessed and compared. Results: Fifty-four subjects and 37 controls were enrolled. Amongst subjects, 46.3% had prehypertension and 53.7% had mild hypertension. Mean values compared to age-matched controls for MAP were 102.68 +/- 7.48 vs 83.25 +/- 6.08 mmHg ( $p < 0.001$ ), LDL 3.75 +/- 0.95 vs 3.32 +/- 0.93 mmol/L ( $p=0.03$ ), FBG 4.65 +/- 0.54 vs 4.33 +/- 0.42 mmol/L ( $p=0.03$ ), BMI 28.81 +/- 5.16 vs 24.12 +/- 4.91 ( $p < 0.001$ ). The mean BP was significantly associated with BMI, FBG, triglycerides, HDL and the TC/HDL ratio. Conclusions: Greater BMI, FBG, HDL, triglyceride levels and TC/HDL ratio characterised the young adults with pre/mild hypertension. The data suggests that hypertension in young adults is secondary to metabolic syndrome.

### Keywords

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