evidence and recognition of sympathetic augmentation as the main cause for essential hypertension in a significant number of patients especially those with no known attributable secondary causes and those who are young. We discuss the role of the ‘adrenaline hypothesis’ in the pathophysiology of hypertension.

PHENYLETHANOLAMINE-N-METHYLTRANSFERASE INHIBITION FOR SUSTAINED BLOOD PRESSURE REDUCTION IN RATS

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Introduction: Hypertension is having an increasing impact on the world population’s morbidity and mortality. The pathogenesis of hypertension is multifactorial but the ‘adrenaline hypothesis’ is being increasingly identified as a cause for hypertension in the young.

Objective: The aim of this study is to assess the extent and sustainability of blood pressure fall following peripheral blockade of adrenaline synthesis and to assess the use of THIQ and its ability to block peripheral adrenaline synthesis.

Methodology: Inbred strain of spontaneously hypertensive rats (SHRs) of Wistar-Kyoto Japanese strain rats were obtained and randomised into treated and control groups. Indirect systolic blood pressure (SBP) was measured under ether anaesthesia. 1,2,3,4-Tetrahydroisoquinoline administered chronically. Blood collected for plasma catecholamine measurement and BP/HR measured at regular intervals.

Results: Baseline SBP, HR and body weight comparable between treated and control groups (p=1.00, p=0.20 and p=0.22, respectively). Significant SBP drop seen post PNMTI administration (p=0.02). SBP also showed significant drop in week 1 (p=0.03) and week 2 post treatment (p=0.04). Treated SHR plasma catecholamine and dopamine levels also dropped 2-weeks following the PNMTI administration (p= 0.04).

Conclusion: This study is consistent with adrenaline hypothesis in the pathogenesis of essential hypertension in young spontaneously hypertensive rats. Consequently, we have also shown that chronic adrenal medullary inhibition with 1,2,3,4-Tetrahydroisoquinoline will result in sustained BP reduction.

PREHYPERTENSIVE STATE, METABOLIC SYNDROME AND CARDIOVASCULAR RISK FACTORS AMONG YOUNG ADULTS IN RURAL MALAYSIA

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Introduction: 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%.

Objective: 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.

Methodology: 484 subjects attending primary care clinics were screened. 91 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), FBS 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, FBS, triglycerides, HDL and the TC/HDL ratio.