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**ABSTRACTS FROM THE 4TH INTERNATIONAL
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AMERICAN HEART ASSOCIATION

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**“EXTENDING THE BENEFITS
OF PREVENTION TO ALL”**

PULSUS



0276 TREND OF ELEVATED BLOOD PRESSURE FROM CHILDHOOD TO ADULTHOOD OVER A 17-YEAR PERIOD. CAN ESSENTIAL HYPERTENSION BE PREDICTED?

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Objective: To establish the trend of elevated blood pressure (BP) levels from childhood to adulthood. To determine the prevalence of elevated blood pressure in adulthood of patients who had elevated blood pressure in childhood of primary prevention program.

Design: A 17-year follow-up study of 1000 children (500 males and 500 females) who were followed up from 1982 until 1999. All children had a normal blood pressure at the age of 10 years. Two groups were compared: one group included the patients who had elevated blood pressure in childhood and the other group included the patients who had normal blood pressure in childhood.

Results: The prevalence of BP was almost the same in all correlations between childhood and adult blood levels (19.1% to 19.9%) for systolic BP and 17.1% to 17.6% for diastolic BP, varying between age. A greater number of subjects had elevated blood pressure in adulthood (37.7% for systolic BP and 37.7% for diastolic BP) in subjects who had elevated blood pressure in childhood and 17.1% for systolic BP and 17.6% for diastolic BP in subjects who had normal blood pressure in childhood. These results suggest that people at highest risk of hypertension are those who had elevated blood pressure in childhood.

0277 BLOOD PRESSURE INCREASES IN CHILDHOOD ARE RELATED TO INCREASED LEFT VENTRICULAR MASS IN ADOLESCENCE

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Left ventricular mass (LVM) is a determinant of cardiovascular morbidity and mortality. In children, the relationship between LVM and blood pressure levels. The objective of this study was to determine if elevated blood pressure in childhood is associated with increased LVM in adolescence. We recruited a cohort of 107 New Zealand young adolescents (50 males and 57 females) aged 10-12 years and obtained the distribution of LVM and left ventricular mass index (LVMi) in this population. We measured LVMi by echocardiography. LVMi was higher in boys (117±22g/m^{2.7}) than in girls (102±18g/m^{2.7}), with significant between gender differences only when gender was adjusted for body mass index, height or weight. Among boys and girls, LVMi index for height^{2.7} was independently (p<0.001, p<0.01) associated with body mass index, weight, and increases in systolic blood pressure (average 7.1) and inversely related to exercise heart rate (average 145/min). Blood pressure in childhood was also associated with LVMi in an early life that has relevance for prevention strategies in young.

0278 IS THE ESSENTIAL HYPERTENSION A METABOLIC DISEASE?

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Objective: To assess the prevalence of metabolic risk factors in subjects with essential hypertension.

Methods: 555 essential hypertension patients (mean age 56.5±10.5) were divided into the hypertension group (n=500) and the control group (n=55) by randomization. The prevalence of hypertension was 100% in the hypertension group and 100% in the control group. The prevalence of hypertension was 100% in the hypertension group and 100% in the control group. The prevalence of hypertension was 100% in the hypertension group and 100% in the control group.

Results: Metabolic risk factors (BMI, FPG, HDL-C, TG, and glucose) were significantly higher in the hypertension group than in the control group. The prevalence of hypertension was 100% in the hypertension group and 100% in the control group.

Conclusion: The results suggest that essential hypertension is associated with the metabolic syndrome. The prevalence of hypertension was 100% in the hypertension group and 100% in the control group.

Factors	Females <45 y	(n=148) >45 y	Males <45 y	(n=211) >45 y
BMI >27	0.29***	0.22***	0.28***	0.26***
FPG >115	0.04 NS	0.27*	0.08*	0.12 NS
TG >1.6	0.25**	0.25*	0.23**	0.19 NS
Tot-cholesterol >6.2	0.25**	0.25 NS	0.28 NS	0.26 NS
Gly >5.6	0.28 NS	0.20 NS	0.15 NS	0.27 NS

Conclusion: Subjects with hypertension (the obese population) are more obese and have more other metabolic risk factors. Younger men and older women are related to the clinical risk factors. Further study is needed to clarify the relationship between hypertension and metabolic risk factors.

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0279 OXIDATIVE STRESS AND URINARY ALBUMIN EXCRETION IN ESSENTIAL HYPERTENSION

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Increased homocysteine and oxidant stress (TAAR) suggest early markers of vascular dysfunction. Has been related to cardiovascular risk. Furthermore, the role of oxidative stress (OS) in the development of vascular disease has been evaluated as a marker between urinary albumin and OS in essential hypertension. Objective: To evaluate the relationship between urinary albumin and OS in essential hypertension.

Methods: 50 essential hypertension patients (25 males and 25 females) were recruited with a left ventricular hypertrophy (LVH) and a left ventricular mass index (LVMI) >120 g/m^{2.7}. The patients were divided into two groups: 25 patients with LVH and 25 patients without LVH. The patients were divided into two groups: 25 patients with LVH and 25 patients without LVH. The patients were divided into two groups: 25 patients with LVH and 25 patients without LVH.

Results: The patients with LVH showed significantly elevated serum homocysteine, F2-isoprostanes and decreased antioxidant capacity compared to those without LVH. Urinary albumin was correlated with serum homocysteine (p<0.001, p<0.001) and inversely correlated with antioxidant capacity (p<0.001, p<0.001).

	MA patients	NA patients	Control
DC (mmol/L)	45.4±3.1*	39.4±2.5	37.8±3.0
TBARS (nmol/L)	0.88±0.03*	0.77±0.05*	0.48±0.05
Fr-TBARS (pmol/L)	1.49±0.06*	1.29±0.04*	1.07±0.05
AOC _{12h} (h)	39.4±0.6**	34.0±0.6*	39.4±0.6
GSII (mg/dl/100d)	55.2±4.2*	57.5±3.4	54.1±2.7

*p<0.05, **p<0.01 vs control, †p<0.05 vs MA group

Conclusion: The results suggest that increased homocysteine, TBARS, and Fr-TBARS are associated with increased oxidative stress in hypertension. Urinary albumin is correlated with serum homocysteine, TBARS, and Fr-TBARS. Urinary albumin is correlated with serum homocysteine, TBARS, and Fr-TBARS.