to using BP, mean arterial pressure (MAP), total cholesterol, HDL, and LDL between high and low CRP groups. High CRP patients did however demonstrate higher BMI (p<0.001), triglycerides (<121% vs. p=0.07), %fat (66% vs. p=0.01), resting heart rate (48% vs. p=0.004) as well as a lower peak VO2 (9%; p<0.0001) respectively.

Results: Following CRET, both high and low CRP groups exhibited statistical improvements in %fat (-3.0%, -4.3%), HDL (+7.3%, +7.1%), triglycerides (-12.1%, -8.2%) and peakVO2 (+11%, +8.8%) respectively. Systolic diastolic and MAP improved in patients with low CRP but did not change in high CRP patients (Table).

Conclusion: Therapeutic lifestyle change implemented through CRET improves most CV risk factors. High levels of inflammation, however, appear to blunt the hemodynamic improvements normally associated with CRET.

T1161-178
N-Terminal Pro-Bra natriuretic Peptide Can Identify High Risk Patients With Hypertension and Preserved Left Ventricular Systolic Function in the General Population
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Background: N-terminal pro-Bra natriuretic Peptide (NT-proBNP) has shown promising ability to identify subjects with cardiovascular diseases (CV) including hypertension. The purpose of the study was to evaluate NT-proBNP as a marker of high-risk patients with hypertension and preserved left ventricular systolic function (UVSF) in the general population.

Methods: A total of 683 unselected subjects (383 women and 300 men) older than 50 years (mean age 68 ± 11 years, range: 50-89 years) from randomly selected general practitioners filled in a heart failure questionnaire, had an ECG recorded, echocardiography performed and blood samples taken, and blood pressure and heart rate were measured. Hypertension was history of hypertension or blood pressure exceeding 150/90. Preserved UVSF was LVEF<0.50.

Results: 316 subjects fulfilled the criteria of hypertension. Median (range) follow-up was 1145 (51-1197) days, 25 deaths were registered. In a Cox proportional hazards analyses sex, age, UVSF, systolic and diastolic blood pressures, logNT-proBNP were evaluated as potential prognostic factors for mortality. LogNT-proBNP (hazard ratio (HR)=6.4, p<0.0001) and male sex (HR=3.2, p=0.007) were independent markers for mortality.

Conclusion: In this large scale of the general population, NT-proBNP was a strong predictor of death within the population suffering from hypertension.

T1161-179
Serum Uric Acid and Risk for Development of Hypertension: The Normative Aging Study
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Background: Experimental and epidemiological data suggest that uric acid might have a role in the pathogenesis of hypertension. We sought to examine if uric acid predicts the risk of developing hypertension in a group of normotensive adult males.

Methods: The Normative Aging Study, established in 1961, is an ongoing longitudinal cohort of 2280 males initially free from chronic medical disorders such as hypertension. Comprehensive medical and laboratory examinations are performed every three to five years. We used multivariate Cox proportional hazards analysis to determine independent risk factors for the development of hypertension. Variables considered were serum uric acid (SUA) level, age, body mass index (BMI), alcohol intake, smoking status, fasting plasma glucose, total cholesterol, and serum triglycerides. Hypertension was defined by the examining study physician having recorded a diagnosis of hypertension or diabetes mellitus.

Results: At baseline, the study population had a mean age of 42 ± 9 years, a mean BMI of 25.6 ± 2.8 kg/m², and a mean SUA level of 5.8 ± 0.9 mg/dL. In univariate analysis, SUA (HR=6.4, p<0.0001) and male sex (HR=3.2, p=0.007) were independent indicators for mortality.

Conclusion: Uric acid level independently predicted the risk of hypertension in this longitudinal cohort of healthy adult males. These data add to the evidence that uric acid might have a causal role in the development of hypertension.

T1161-180
Which Is the Best Pharmacological Treatment for Obese Hypertensive Patients With Hyperuricemia? Kanako Masuo, Hiroshi Mikami, Toshiro Oghara, Michael L Tuck, Osaka University Graduate School of Medicine, Suita City, Osaka, Japan, Sepulveda VA Medical Center, Los Angeles, CA

Background: It is well-known that obesity and elevated serum uric acid (UA) are risk factors for cardiovascular diseases, and that weight loss (WL) program is an essential component for obesity-hypertension. To know the best way for reducing BP and UA levels in obese, hyperuricemic, hypertensive (HT) patients, we conducted this study. Methods: 6 groups with 20 obese HT men each were measured BMI, BP, UA, plasma renin activity, insulin and leptin at entry and 12 months. The 6 study groups were matched in age, BMI, BP and UA at entry. All subjects had hyper-UA (>6.5 mg/dL) and non-diabetes (HbA1c<6.6%). As a significant WL was defined as more than 10% decrease in BMI at 12 months and success rates were 55% in WL alone, 40% in ARB-WL, 40% in ACEI-WL, 25% in CCB-WL, 15% in alpha-WL and 10% in beta-WL. *P<0.05, **P<0.01 vs beta-WL. UA at 12 months were greater in beta-WL > CCB-WL > alpha-WL > WL-lone > ACEI-WL > ARB-WL (7.4 mg/dL, 6.8, 6.5, 6.1*, 5.8*, 5.3*) and BP levels at 12 months in pharmacological Tx with failure in WL were lower than in WL alone, and higher than in pharmacological Tx with success in WL, although BP were similar among the 5 pharmacological Tx groups. Decreases in BMI were greater in WL alone > ARB-WL > ACEI-WL > CCB-WL > alpha-WL > beta-WL. Decreases in UA were greater in ARB-WL > ACEI-WL > alpha-WL > beta-WL > CCB-WL > WL-lone. In insulin were greater in ARB-WL > ACEI-WL > alpha-WL > beta-WL > CCB-WL > WL-lone. Leptin decreased only in subjects with a significant WL. Changes in UA were correlated with changes in UA. Conclusions: These results demonstrate that beta- and alpha-blockers and CCB groups appear to be more resistant to WL and reducing hyper-UA compared with ARB, ACEI or WL alone groups, suggesting that ARB or ACEI should be taken as the first choice for obesity hypertensive with hyperuricemia. WL is a effective treatment for obesity hypertensive with hyperuricemia. Suppression of sympathetic overactivity and hyperinsulinemia appears to be major roles in the mechanisms of lowering serum UA in obese hypertensives.

T1161-181
Regular Exercise Improves Risk Profile and Motor Development in Early Childhood
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Even in young children a weakened motor development parallelized by impaired cardiovascular risk profile can be observed in industrialized countries. Therefore 5 year old children were included in a prospective, controlled 2-year intervention study to assess the efficacy of a regular exercise program (3x a week) on blood pressure (BP), heart rate (HR), BMI, body mass index (BMI) and motor skills.

Methods: 160 children out of a total of 265 (aged 3.5 years) in 17 nursery schools in Germany participated in a regular exercise program. 105 comparable subjects served as controls. BP and HR were evaluated at rest by standardized procedures. BMI was calculated by body-weight and height. Standardized motor testing included jumping, running, balance and coordination skills.

Results: Before intervention there were no significant differences between the groups in all measurements and tests. So far, after one year of intervention, no difference could be observed in BMI between interventions (I) and controls (C). In contrast, HR which is known to decrease with age, decreased more in I (7.4%) than in C (5.8%) (p<0.05). This was true for diastolic BP as well with a tendency towards lower systolic BP, respectively.

Conclusion: The intervention group improved in all motor tests, with significant differences (p<0.001) in such as balance (180cm vs. 130cm) and coordination tests (23.2 points vs.16.7 points).

T1161-182
Treatment Patterns for Hypertension, Dyslipidemia, and Both Conditions in the United Kingdom: 1997 to 2001
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Background: Little is known about the incidence and treatment rates of hypertension (HTN), dyslipidemia (DYS), and particularly concomitant HTN/DYS in the United Kingdom (UK). This study was therefore undertaken to measure the annual incidence rates of recorded, diagnosed, and treated HTN, DYS, and HTN/DYS in a primary care setting.

Methods: This was a retrospective cohort study using the General Practice Research Database. A fixed population of 399,933 patients aged ≥40 years, present throughout (or died during) 1997 to 2001, and who had a minimum 1-year, lead-in history were studied. Incident HTN patients had not previously been treated or met the criteria for HTN (systolic blood pressure [BP] ≥140 mmHg) prior to January 1 each year, then recorded as ≥140/90 mmHg, subsequently. Similar analyses for incident DYS (total cholesterol >5 mmol/L or low-density lipoprotein [LDL] cholesterol >3 mmol/L) and concomitant HTN/ DYS were performed. Incident treatment was defined as newly treated patients each year. Logistic regression was used to model trends in the incidence rates.

Results: Between 1997 and 2001, incident DYS diagnoses rose from 1.2% to 3.6% (+30% per annum [pa]). Incident HTN diagnoses fell from 2.0% to 1.1% (+14% pa), but concurrent HTN/DYS rose from 0.8% to 2.0% (+27% pa). Incident DYS drug treatment rose from 0.8% to 1.8% (+22% pa). Treatment for HTN rose from 2.4% to 2.9% (+5% pa).