L001

BLOOD PRESSURE REACTIVITY TO MENTAL STRESS AND SUSTAINED HYPERTENSION AFTER SIX MONTHS OF FOLLOW-UP. HOSPITAL STUDY.

Some studies reported an increased risk of developing sustained hypertension in borderline or mildly hypertensive subjects showing an exaggerate response of BP to mental stress. The objective of this study was to assess the predictive values of BP reactivity to mental arithmetic stress task (MAST) in relation to the development of sustained hypertension. Two hundred and eleven subjects with untreated mild hypertension were included in the hospital study. A hundred and thirty-eight of them (68%) were included in the study of cardiovascular reactivity. Following WHO guidelines, patients were visited on month 1, 3 and 6 after diagnosis. Sustained hypertension was defined as a systolic BP > 140 mmHg, a diastolic BP > 90 mmHg, or both, or antihypertensive treatment after 6 months of follow-up. Patients with a systolic BP increase during the test ≥ 20 mmHg, a diastolic BP increase ≥ 15 mmHg, or both, were considered as hypertensives.

The proportion of patients who developed sustained hypertension after 6 months was higher in hypertensives than in normoreactors (69.3% vs. 72.9%, p=0.02). Positive and negative predictive values of MAST were 89.3% and 27.1%, respectively. When controlling for gender, age and clinical systolic BP in a logistic regression model, hyperreactivity to mental stress task was an independent predictor of sustained hypertension.

In conclusion, the hyperreactivity of BP to mental stress identifies a group at high risk of developing sustained hypertension after 6 months of follow-up.

Key Words:
Cardiovascular reactivity, mental stress, predictors of sustained hypertension, mild hypertension.

L002

Risk factors and cardiac disease in Hypertensive Menopausal Women
P. Palmiero, M. Maitelo
Cardiology Department A.U.S.L.LR 1, Brindisi, Italy.

Studies about risk factor and cardiac disease in postmenopausal women affected by hypertension present conflicting results. As cardiac disease we mean left ventricular hypertension (LVH) and/or diastolic dysfunction (DD). LVH is diagnosed by left ventricular mass index > 125 g/m2; D.D. as E/A ratio <1 is measured by Pulsed Doppler Eco. Our study goal is to relate cardiac disease and risk factors. 224 consecutive hypertensive postmenopausal women, 60 surgical (26.8%) and 164 physiological, all free from organic substitutive treatment, aged 42-57 years, mean age 49.8 yrs. underwent rest E.C.G. M.B. Mode and Doppler Eco to detect presence of LVH and E/A ratio. Colesteral, triglycerides and glucose level were measured and smoking status was investigated. 144 women (64.5%) had LVH, 80 (35.7%) were free. D.D. was present in 90 (40.2%) women, 38 (17%) had both LVH and D.D. 90 women (40.2%) presented high level of total cholesterol, 34 (15.2%) of triglycerides, 42 (18.7%) of glucose and 50 (22.3%) smoked more than 20 cigarettes every day. Considering all 224 postmenopausal women LVH is well related with high colesterol level (p<0.03) and if we consider only 38 women with both LVH and D.D. the correlation is little more strict r=0.446, p<0.04. LV.H. is also related with high triglycerides level r=0.814, p<0.006. There is no significant relation between LVH and glucose level, p=0.56 and between LVH and smoking p=0.26. There is no significant difference between surgical and physiological group. We conclude that LV.H., in hypertensive post-menopausal woman is linked with dislipidemia, and these are primary cardiovascular risk factors, for major events.

Key Words: postmenopausal, hypertension, left ventricular hypertrophy, diastolic dysfunction, cholesterol, triglycerides, glucose, smoke.

L003

Cardiovascular Risk Factors; Blood pressure and Body Weight in Hispanic School Aged Children, V. Chaudhrardhan, D. Pan, and P. James, Department of Pediatrics, Martin Luther King Jr./Drew Medical Center, Los Angeles, California.

High blood pressure causes significant left ventricular hypertrophy in adults. If unrecognized it usually track into adult life as essential hypertension. Among the predictors of hypertension, childhood blood pressure (BP) and body weight play an important role. There are only a few published data available in Hispanic children analyzing the occurrence of these predictors. This study reviewed the data of 3096 children (ages 6 to 12 years) from the International Health and Nutrition Surveys III (NHANES III) database. The ethnic distribution was 807 White (25.9%), 1672 African American (AA) (34.4%), 1080 Hispanic children (34.9%) and the others (4.4%). Based on the report of the Second Task Force on Blood pressure Control in Children, we have identified a subgroup of 125 children (4%) who had >95th of either systolic BP and/or diastolic BP, adjusted to their age, gender and height. In this subgroup: Male female was 1:1 and 31% were White, 47% were AA, and 53% were Hispanic. Further, 47.2% of children in the high blood pressure group were overweight, compared to 14.6% of the normal blood pressure group, based on their BMI of >95th for their age and gender (NHANES I). In the high blood pressure group 15% of Whites, 40% of AAs, and 64% of Hispanics were overweight.

Risk factors for high blood pressure in children

<table>
<thead>
<tr>
<th>Factor</th>
<th>RR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA vs Whites</td>
<td>1.692</td>
<td>1.003-2.855</td>
<td>0.048*</td>
</tr>
<tr>
<td>Hisp. vs Whites</td>
<td>1.916</td>
<td>1.146-3.203</td>
<td>0.013*</td>
</tr>
<tr>
<td>Hispanic vs AA</td>
<td>1.723</td>
<td>1.279-2.342</td>
<td>0.174</td>
</tr>
<tr>
<td>Female vs Male</td>
<td>1.651</td>
<td>0.996-1.689</td>
<td>0.45</td>
</tr>
<tr>
<td>BMI &gt;95% f</td>
<td>&lt;0.1%</td>
<td>&lt;0.0001</td>
<td></td>
</tr>
</tbody>
</table>

The risk for high normal blood pressure or mild hypertension is almost two folds higher in Hispanic children than the Whites and almost equal to that of AAs. Body Mass Index is also a major contributory risk factor for high blood pressure in these children. Further studies should be done to: a) identify other contributing factors, b) evaluate the effect of dietary and physical activity on childhood high blood pressure in this population.

Key Words:
High blood pressure, Body weight, Hispanic, Children.

L004


With the aim of primary and secondary prevention of AH it were identified organized population of the city-school teachers-women in the age of 60-66 (645 persons) using the standard WHO questionnaires and double checking of the arterial blood pressure.

The investigation showed the high spread of frequency of AH:306, borderline AH:111,6%, and CHD:5,3%. It should be mentioned that these pathologies revealed at a similar frequency in all age groups, revealed by vegetative disturbances and enrolled first time in 45% cases. 75% of patients weren't treating or the efficacy of treatment was very low. The normal criteria of AH often failed to correspond to subjective data of patients. In persons, whose normal arterial blood pressure was 90-00/60-70 mm hg, the oscillation of arterial blood pressure within the high normal frame was manifesting like hypertensive crisis. Therefore the analysis of our results gives us possibility to make the criteria of normal arterial blood pressure in women depended on age (especially pre- and post-climacteric period) and the other risk factors.

The revealed persons with AH undergo the secondary prevention by using Nifedipine and Tocem and the primary prevention by correction of risk factors of AH (overweight, hyperdynamism, smoking, alcohol). Because of specificity of contingent (teachers) among the risk factors there was very low hypodynamia, smoking, alcohol and very high overweight-60%.

The patients were under our dynamic observation during 6 months. After 6 months they were investigated again. The results showed the efficacy of such programs.

Key Words: women, AH, borderline AH, primary and secondary prevention, overweight.