P-561

ASSESSING THE REAL CARDIOVASCULAR RISK OF TREATED ESSENTIAL HYPERTENSIVE POPULATION. ARE WE DOING WELL?


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In a cross-sectional, nation-wide survey, we evaluated the cardiovascular risk profile of treated essential hypertensive population through the application of the prognostic risk stratification chart proposed by the 1999 WHO / ISH committee.

The study was performed at Cardiac Care setting by assessing clinical reports of 1038 (52.1% females) treated essential hypertensives with a mean age: 59.7 ± 12.2 years, mean BMI: 27.4 ± 4; mean BP: 142.1 ± 15 / 85.8 ± 10 mmHg and mean PP: 56.3 ± 12.5 mmHg. Antihypertensive drugs received by patients (%): One: 46.82; Two: 32.76%; Three: 13.49, and 4 or more: 5.97 %, 472 (45.5%) patients had dyslipidemia, but only 322 (31.02%) were receiving statins, and 194 (18.69%) antiplatelet drugs.

Considering the levels of BP: 36.42 % had Mild; 50.4% Moderate and 13.10% severe HTN. On the other hand, 10.02% had no other risk factors (RF); 33.70 % had 1 or 2 RF; 3 or more RF or diabetes or TOD had 25.63 %, and CV complications 31.80%. According to the WHO / ISH stratification chart only 6.36 % of treated hypertensives had a Low Risk; while 35.65 % had a Medium Risk; 24.86 % High Risk and 33.14 % a Very High Risk.

Despite of antihypertensive treatment most of our hypertensive patients (58%) continue to be at high CV risk indicating that to increase the reduction in their CV morbidity and mortality we need to improve our therapeutic approach by intensifying the control not only of BP levels but also the other CV risk factors.

Key Words: Cardiovascular risk, Essential hypertension

P-562

ATRIAL FIBRILLATION DURING ACUTE MYOCARDIAL INFARCTION: ASSOCIATION WITH HISTORY OF HYPERTENSION

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Atrial Fibrillation (AF) occurs in some 10% of patients with acute myocardial infarction (AMI). The aim of our study was to ascertain whether HT is associated to onset of AF during AMI.

Four hundred and twenty-two consecutive patients (mean age 66.1 ± 12.3 years, females n = 127) without chronic AF admitted to 3 coronary care units because of definite AMI were studied. Among them 193 (46%) had documented HT (duration 11.6 ± 8.9 years). In the HT group, 32 (17%) patients had paroxysmic AF during the 1st week of hospitalization while among the normotensives 16 (7%) had AF (p = 0.002). At univariate logistic regression, AF (used as dichotomic dependent variable) resulted related to HT [T=3.00, p = 0.003, odds ratio 2.6 (95%CI 1.4-4.9)]. In the multivariate logistic regression including possible clinical confounders, age (T=2.1, p = 0.03), presence of heart failure during the 1st week of hospitalization (T=3.8, p < 0.0001) and HT [T=2.1, p = 0.03, odds ratio 2.1 (CI 1.1-4.3)] resulted independently associated to onset of AF, while gender, diabetes mellitus, CK-MB peak and thrombolytic therapy, were rejected from the model. Inclusion of drug treatments in the logistic model did not modify the results. Blood pressure values on admission did not result related to AF.

In conclusion, this study shows that onset of AF during AMI is more frequent in patients with HT. This association is independent from haemodynamic changes and other clinical confounders.

Key Words: atrial fibrillation, myocardial infarction, hypertension

P-563

EXAGGERATED BLOOD PRESSURE RESPONSE TO EXERCISE AS A PRECURSOR OF FUTURE HYPERTENSION

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This study was designed to assess the clinical usefulness of an exaggerated blood pressure (BP) response to exercise in predicting the development of sustained hypertension in a population of healthy subjects with normal and high-normal BP values at rest. We examined a population of 246 Italian Air Force officers (aged 49.5 ± 4.6 years) who underwent a bicycle ergometer exercise testing at baseline and then were followed for 52.2 ± 14 months. At entry 45 patients (18.3 % GROUP A ) showed an exaggerated blood pressure response to exercise (systolic BP ≥ 210 mmHg and/or diastolic BP ≥ 105 mmHg at maximum work load), while 201 patients (81.7 % GROUP B) had a normal pressure response. No significant difference was found at entry between the two groups regarding age, family history of hypertension or cardiovascular disease, body mass index, smoking habit, exercise tolerance and metabolic abnormalities. All patients underwent a bicycle exercise test with a load increase of 25 Watt every two minutes, until exhaustion or until they reached 85 % of their maximal predictable heart rate. No significant difference was found between the two groups concerning maximum work load and exercise duration as well as baseline and maximum heart rate. Patients of group A showed a significantly higher systolic and diastolic blood pressure at maximum work load (214.3 ± 15.2 vs 187.5 ± 17.8 and 108.3 ± 10.1 vs 83.8 ± 7.1 respectively ). At the end of follow-up period 30 patients belonging to group A (66.7 %) and 33 patients belonging to group B (16.4 %) had developed sustained hypertension and were treated either with beta-blockers or ACE inhibitors. These results seem to suggest the idea that an exaggerated response to exercise represents an important risk factor for new-onset hypertension from high-normal state and might improve the prediction of the need for antihypertensive medication in subjects with high-normal values at rest.

Key Words: Blood Pressure response, Bycicle exercise test, Hypertension risk

P-564

IMPAIRED FASTING GLUCOSE IN HYPERTENSIVE PATIENTS

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Purpose: To determine the prevalence of multiple risk factors for CAD, especially previously undetected IFG and diabetes mellitus, in a sample of treated hypertensive patients.

Methods: We conducted this cross-sectional study on 108 patients, 50 years and older, with essential hypertension within an urban academic outpatient primary care practice. We obtained blood pressure measurements and laboratory data, including fasting glucose and lipid values from all subjects. We reviewed the outpatient medical record to determine CAD risk factors and current antihypertensive medications. We
toted the number of CAD risk factors to derive a CAD risk score. The mean result of RIA on two timed overnight urine specimens was used to determine the presence of microalbuminuria in patients. To analyze the data, we stratified the entire sample according to the presence or absence of impaired fasting glucose, then used two-tailed unpaired t-tests to compare parameters between the two groups. Pearson’s correlation coefficient was calculated to examine the relationship between FBG, UAE, BMI, lipid values, and the CAD risk score. The analysis was adjusted for patient usage of antiproteinuric medications.

Results: We detected previously undiagnosed impaired fasting glucose in 13.9% of subjects.

HDL score was significantly lower in subjects with IFG. The FBG value directly and strongly correlated with the degree of CAD risk.

Conclusions: Improved fasting glucose (prediabetes) and diabetes mellitus occur with increased frequency in hypertensive patients. IFG and diabetes in hypertension are associated with greater cardiovascular risk.

Key Words: hyperglycemia, hypertension, coronary risk factors

P-565
PHARMACOEPIEMIOLOGICAL, OBSERVATIONAL STUDY TO ASSESS CV RISK REDUCTION IN HIGH RISK HYPERTENSIVE PATIENTS TREATED WITH AMLODIPINE. CORONARIA STUDY
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The aim of this study was to assess the reduction in cardiovascular (CV) risk using the Framingham equation after blood pressure reduction treatment in high risk hypertensive patients achieving optimum blood pressure control according to internationally accepted scientific recommendations of the 1999 WHOISH Guidelines.

This is a one year open label, observational, multicenter prospective cohorts study in hypertensive patients (BP 140/90 or 130/85) with at least another cardiovascular riskfactor, who according to the WHOISH guidelines and the physician judgement an antihypertensive treatment need to be started, added or changed (switched or increased dose). Patient evaluations should occur at baseline (month 0), at month 2 (follow-up visit), at 6 months and 1 year (final visit), consistent with the clinical practice to manage hypertensive patients. The primary assessment parameter was the percent change from baseline in CV risk, estimated Framingham equation after one year of treatment.

7455 patients with an average age 63.5+11 years, female gender 48.6% were included in the intention-to-treat sample. 29% of patients were diabetics and 29% were smokers. The mean values of systolic blood pressure and diastolic blood pressure changed significantly from 162.5±13.2 and 95.3±8.6 mmHg at baseline to 135.8±11.7 and 80.7±7.7 mmHg after 12 months treatment with amlodipine 5-10 mg/day. The CV risk of the patients changed from a mean baseline value of 24.9±16.4 to a final mean of 16.2±12.4. Significantly differences has been found in the reduction of CV risk between males and females from 33.2±17.2 to 22.2±13.8 and 16.0±9.4 to 9.8±6.0 respectively, as well as in diabetics patients (32.0±17.2 to 19.9±13.1) compared with no diabetics (22.0±15.1 to 14.7±11.8). In all cases p<0.0001.

Amlodipine is a drug with a high efficacy rate in the treatment of hypertension with beneficial effects in the management of CV risk.

Key Words: hypertension, cardiovascular risk

P-566
CARDIOVASCULAR RISK ASSESSED BY AMBULATORY BLOOD PRESSURE MONITORING
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The aim of this study was to evaluate how information provided by ambulatory blood pressure monitoring (ABPM) could predict cardiovascular events in hypertensive patients.

It’s a retrospective longitudinal study, with a convenience sampling, in two primary care centers. A total of 251 hypertensive patients without basal antihypertensive treatment were included and followed up for 6 (3.5) years [rank: 1 month-13 years].

A basal ABPM (SpaceLabs 90207) was performed, and Framingham basal cardiovascular risk was calculated. We classified subjects according their basal ABPM cardiovascular risk: Low Risk (Day-time blood pressure (BP) <135/<85 mmHg), Medium Risk (>135 and/or >85 mmHg day-time BP and 24 hours-pulse pressure (PP) <55 mmHg) or High Risk (>135 and/or >85 mmHg day-time BP and 24 hours-PP >54 mmHg). During follow-up every cardiovascular event was recorded. Bivariant analysis and logistic regression model were applied.

Mean age: 51.07 (16) years; women: 134 (53,3%); smokers: 61 (24 %); diabetics: 30 (12%), without target organ damage: 124(56,3%); mean Framingham basal 10 years cardiovascular risk: 11.8%(9,4). A total of 22 (9,5%) cardiovascular events were recorded: [12 (50%) coronary events, 6 (25%) strokes] and 2 died. The age, co-morbid pathologies, office BP and PP, ambulatory pressure and 24 hours-PP, calculated ABPM risk, Framingham risk and diabetes were significantly associated to cardiovascular events. But just ABPM Low Risk predicted good cardiovascular prognostic (OR: 0.09 [IC 95% 0.01-0.77]).

We conclude that optimal day-time BP control could predict good cardiovascular prognostic. The calculated ABPM cardiovascular risk provides useful additional risk information.

Key Words: Cardiovascular risk, Ambulatory blood pressure monitoring, Primary Care

P-567
PREDICTORS OF BLOOD PRESSURE CONTROL IN A TERTIARY HYPERTENSION CLINIC
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Blood pressure control in the United States is suboptimal. Several surveys in our clinic between 1998 and 2001 showed the prevalence of blood pressure control (<140/90 mm Hg) between 68-72%. We attempted to identify characteristics of our population that were predictors for controlled blood pressure that might explain these observed differences.

Randomly selected charts of 165 patients (average age 57+/-14 years, 56% male, 63% white, 63% with a family history) were abstracted. Comparisons were made using Stata 5.0 between the group that achieved blood pressure control (n=107) and those who did not. Blood pressures were taken in a standardized fashion, supervised by the same physician (hypertension specialists) at each visit. The age-adjusted odds ratio (OR) and 95% confidence intervals (95% CI) were calculated for the following characteristics: age (OR=0.99, 95% CI: 0.97-1.01), gender (n=73 females, OR =1.27, 95% CI: 0.66-2.48), race (n=104 white, OR=<0.70, 95% CI: 0.36-1.34), family history (n=104, OR=1.86, 95% CI: 0.99-3.61), no weight change (n=17, OR=1.42, 95% CI: 0.40-5.1), weight gain compared to weight loss (n=148, OR=0.68, 95% CI: 0.33-1.34).

Thus gender, family history, race and weight change were not signif-