C003
THE PRESENCE OR NOT OF MAJOR CARDIOVASCULAR RISK FACTORS DETERMINES THE LINK BETWEEN THE ALLELES OF M235T POLYMORPHISM OF ANGIOTENSINOGEN GENES AND THE RISK OF MYOCARDIAL INFARCTION

We studied the role of the M235T polymorphism of the angiotensinogen gene as a risk to acute myocardial infarction (AMI) according to the presence or the absence of the three major cardiovascular risk factors: hypertension (HT), smoking (SM) and hypercholesterolemia (HCH). 180 healthy (H) men >35 years (controls) and 204 men with MI were studied. All the subjects were genotyped for the M235T polymorphism by means of PCR and restriction enzyme analysis. The case control approach was used. Chi2 with Yates correction and Fisher tests were applied to single comparison of the groups. We found that the MM frequency in all AMI patients was 0.28. After exclusion of patients with the three major risk factors (AMI without HT, HCH, SM, n = 32) increase to 0.50 and when the group of patients have the three major risk factor (AMI with HT, CH, SM, n = 39) the MM frequency decrease to 0.15 versus 0.19 in control group. By the contrary TT genotype was 0.15 in all AMI patient, 0.12 in AMI without HT, CH and SM and 0.31 in the group with the three HT, CH and SM risk (controls = 0.27). When AMI groups, with and without other risk factors, are compared it can be observed that T allele frequency increases significantly in the AMI with HT, CH and SM (0.58 vs 0.31) (p < 0.01). On the contrary, the M allele frequency is higher in the AMI without HT, CH and SM group (0.69 vs 0.42) (p < 0.01). In conclusion, it can be conclude that M allele is an independent risk factor to AMI and T allele is a coadjuvant risk factor when other major risk factor are presented. The lack of studies with the distribution proposed in this study, could lead to hide the real meaning of these genotypes as a cardiovascular risk factor.

Key Words: Angiotensinogen genes; cardiovascular risk factors; myocardial infarction

C004
EVALUATION OF CORONARY FLOW RESERVE IN HYPERTENSIVE PATIENTS BY DIPYRIDAMOLE TRANSOESOPHAGEAL DOPPLER ECHOCARDIOGRAPHY
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The aim of this study was to evaluate the coronary flow reserve (CFR) in hypertensive patients with and without left ventricular hypertrophy (LVH). The CFR was assessed by transoesophageal Doppler echocardiography in 15 normal subjects (group I), 21 hypertensive patients without LVH (group II), and 27 hypertensive patients with LVH (group III). All hypertensive patients were complaining of typical anginal pain with normal coronary angiography. The sample volume was placed at the bifurcation of the left main and left anterior descending coronary arteries. Coronary blood flow velocities were evaluated at rest, 2 minutes after dipyridamole infusion, and 2 minutes after IV aminophylline. The ratio of dipyridamole to rest peak diastolic and systolic velocities (D/R PDV and D/R PSV) were considered as indices of CFR. The D/R PDV was significantly lower in group III than group I and II (1.63 ± 0.24, 2.73 ± 0.41, and 2.1 ± 0.15, respectively; p < 0.05), and it was significantly lower in group II than I (p < 0.05). The D/R PSV was also significantly lower in group III than group I and II (1.65 ± 0.28, 2.8 ± 0.32, and 2.09 ± 0.21, respectively; p < 0.05), and it was significantly lower in group II than I (p < 0.05). The CFR is significantly impaired in hypertensive patients, especially those with LVH as compared with healthy subjects. So, the impaired CFR is one of the important mechanisms for the occurrence of typical anginal pain in hypertensive LVH.

Key Words: Coronary; flow reserve; hypertension transoesophageal; echocardiography

C005
FACTORS RELATED TO MYOCARDIAL INFARCTION IN HYPERTENSIVE PATIENTS WITH ACUTE CORONARY SYNDROM
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Hypertensive patients with an acute coronary syndrome are frequently observed in an Emergency Department (ED). No data are available about the frequency of patients developing myocardial infarction (MI) and factors (patients characteristics, blood pressure (BP), antihypertensive treatment) which may be associated with MI. We prospectively collected the following data of all hypertensive patients (defined as systolic BP > 200 mmHg and/or diastolic BP > 100 mmHg) with an acute coronary syndrome (chest pain lasting for more than 10 minutes and/or pain relief after nitroglycerine application): age, gender, highest and lowest systolic and diastolic BP, history of myocardial infarction, evidence of diabetes mellitus, hyperlipidemia, current cigarette smoking, time until BP reduction reached 75% of highest BP and lowest BP, antihypertensive treatment, and anticoagulation treatment. MI was defined as an elevation of CK-MB above 10%. One hundred and twenty eight (22.4%) out of 571 patients with hypertensive emergencies presented with acute coronary syndrome. MI occurred in 29 patients (22.7%). No significant differences between MI- and non-MI patients were observed concerning highest (sys: 206 ± 22 vs 202 ± 23 mmHg; dia: 106 ± 18 vs 106 ± 15 mmHg) and lowest BP reached in the ED (sys: 129 ± 19 vs 124 ± 15 mmHg; dia: 67 ± 13 vs 68 ± 10 mmHg), baseline characteristics, time until BP reached 75% of highest BP (79 ± 74 vs 80 ± 64 min) and lowest BP (194 ± 149 vs 230 ± 123 min), and anticoagulation treatment. The lowest rate of MI was noted in patients treated with nitroglycerine (19.1%). In patients treated with an alpha- or betablocker the percentage of MI was markedly higher (32.1% or 33.3%). The only possible factor for the development of MI is the antihy-