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Abstracts Issue
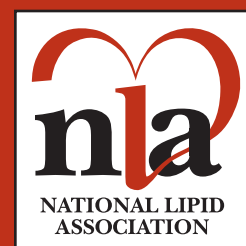
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and CABG. We analysed the following data: age, sex, hypertension, hyperlipidemia, diabetes, carotid bruit, the presence of peripheral arterial obliterative disease and their association with the severity of carotid and coronary artery disease. **Results:** The prevalence of ICA stenosis over 50% occurred in 16,1% of patients, the prevalence of ICA stenosis over 70% was 6,4%. According to risk factors we found statistical significance in correlation between ICA stenosis over 50% (p < 0,0001), and also between ICA stenosis over 70% (p < 0,002) with peripheral artery occlusive disease. We did not find any statistical significance in correlation of carotid artery stenosis with age, sex, hypertension, hyperlipidemia and diabetes. We found statistical significance in correlation for coronary artery disease only with hyperlipidemia (p < 0,029), other risk factors (age, sex, hypertension, peripheral artery occlusive disease and diabetes) did not correlate in statistical significance with coronary artery disease. **Conclusions:** We determined the prevalence of carotid artery disease in patients undergoing CABG and/or VR. We analysed risk factors and their association with carotid artery disease and also with coronary artery disease.

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BENEFICIAL EFFECT OF PREINFARCTION ANGINA ON VENTRICULAR ARRHYTHMIAS IN PATIENTS AFTER PRIMARY ANGIOPLASTY

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Objective: Preinfarction angina (PIA), which can serve as a surrogate marker for ischemic preconditioning, is associated with the better clinical outcome in patients with acute myocardial infarction (AMI). The antiarrhythmic effect of PIA in patients treated with primary angioplasty (PA) has not been investigated. The aim of this study was to clarify the effect of PIA on ventricular arrhythmias in patients after PA. **Methods:** 17 consecutive patients (15 male; aged $52,8 \pm 2,5$ years) with AMI after PA were prospectively studied and divided into two groups: A (n=8) with presence of PIA (defined as at least one brief episode of angina occurred within 2-72 hours before onset of AMI) and B (n=9) without PIA. These groups were matched for baseline characteristics. A numbers of isolated ventricular premature beats (VBP), ventricular couplets (VC) and non-sustained ventricular tachycardia (NSVT) recorded on 24-hour Holter monitoring in the first day of AMI were estimated. **Results:** Total numbers of VPB, VC, NSVT were significantly lower in group A than in group B ($81,0\pm29,95$ vs $379,44\pm117,83$, $\rho=0,023$; $0,57\pm0,29$ vs $50,0\pm31,8$, $\rho=0,005$; $2,28\pm1,79$ vs $58,33\pm37,09$, $\rho=0,019$ recpectively). **Conclusions:** PIA is associated with decrease of ventricular arrhythmias in patients after PA. This favorable effect of PIA may be detected by 24-hour Holter monitoring in early phase of AMI.

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THE MIAMI STUDY (MARKERS OF INFLAMMATION AND ATORVASTATIN EFFECT IN PREVIOUS MYOCARDIAL INFARCTION): RESULTS OF A PROSPECTIVE, MULTICENTER STUDY

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Objective: MIAMI is a prospective multicenter clinical study designed to investigate the relationship between C-IMT progression and changes in circulating markers of inflammation, coagulation and endothelial dysfunction in patients with stable CAD treated for two years with 20 mg/day atorvastatin. **Methods:** C-IMT, blood lipids and soluble markers were measured at baseline, at the 12th month and at the end of the study in eighty-five patients. **Results:** Atorvastatin induced C-IMT regression. Fibrinogen, TFPI-total, sICAM-1, sE-selectin, IL-8 and vWF, but not hs-CRP, IL-18, TFPI-free, sVCAM-1, IL-6, TNF-α and sCD40L, decreased upon treatment. Changes

in lipids did not correlate with C-IMT regression. Changes in single soluble markers correlated poorly with C-IMT regression, but strongly when combined in relevant composite scores (inflammation/coagulation-score, endothelial activation-score, soluble markers-score and total-score). **Conclusions:** In patients with stable CAD, a moderate dose of atorvastatin was associated with regression of C-IMT. This effect was correlated with changes of inflammation, thrombosis and endothelial dysfunction profiles.

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BIOCHEMICAL AND MECHANICAL PROPERTIES OF INTRALUMINAL THROMBUS FROM HUMAN ABDOMINAL AORTIC ANEURYSM

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Abdominal aortic aneurism (AAA) is often associated with an intraluminal thrombus (ILT) which is a source of matrix metalloproteinases (MMP2 and MMP9) involved in aneurismal rupture. Biomechanical considerations are important to understand this process and to improve the prediction of its occurrence. We correlated MMP2 and MMP9 content with permeability (k) and compression properties (E) of the same ILT samples. ILTs from 12 patient undergoing surgical AAA resection were processed to obtain the luminal (L), medial (M) and abluminal (AL) layers. Samples of each layer were processed for immunoenzymatic and zymography detection of MMP2 and MMP9, compression/permeation determination, histology/immunohistochemistry and Scanning Electron Microscopy analysis (SEM). Expression of MMP9 was significantly higher in L (+625.9%±231) compared to M (327.7%±140) and AL (100%) and

this was inversely correlated with the compression properties of ILTs measured by elastic modulus (EL=11.1±2.9; EM=19.4±12.4; EAL=23.4±17.0, E=kPa). MMP9 activity followed the same pattern. Conversely, MMP2 levels did not change within the layers (average 26±4.2 ng/mg protein content). SEM analysis showed a non-homogeneous trabecular fibrin structure with smaller pores in L and AL compared to M, consistent with the measured values of permeability, lower in L and AL compared to M (kL=0.03±0.02; kM=0.04±0.04; kAL=0.04±0.02, k=mm4/N-s). Our data show that the ILT is non homogeneous and that its mechanical and biochemical properties vary across the thickness, with the luminal layer exhibiting the highest MMP9 content and the lowest stiffness and permeability.

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HEAT SHOCK PROTEIN AND ANTIBODY RESPONSE TO CHLAMYDIA PNEUMONIAE IN CORONARY ATHEROTHROMBOSIS

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Atherothrombosis might be caused by autoimmune and infectious underlying mechanisms. We aimed to investigated the presence of antibodies against Chlamyidia pneumoniae (Cp) and Cp heat shock protein 70 (HSP) in atherothrombosis. **Patients and Results:** Study included 211 subjects of whom 111 were patients with acute coronary syndromes and 100 were aged and sex matched controls: 50 from Serbia and 50 from California. We measured anti Cp HSP 70 antibodies and anti Cp IgG antibodies. Total of 72% patients with ACS were positive on anti Cp IgG antibodies, 40% of controls from Serbia and 14% of controls from California. Seropositivity to Cp HSP 70 IgG was detected in 31% of patients with ACS, 13% of controls from Serbia. None of the subjects from California was positive on anti Cp HSP 70 IgG. There was the deference between anti Cp IgG antibodies (p<0.001). Cp HSP 70 IgG antibodies where higher in patient population then in controls