P6.19: GENDER DIFFERENCES OF ARTERIAL STIFFNESS AND CENTRAL BLOOD PRESSURE IN PATIENTS WITH ARTERIAL HYPERTENSION AND THE INFLUENCE OF MENOPAUSE

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to cardiovascular risk factors remain unclear. We attempted to compare the contribution of cardiovascular risk factors to the variance in cIMT and WLR.

Methods: Noninvasive measurements of cIMT and WLR were made with high-resolution ultrasonography in 5,983 subjects. There were males aged 40 to 55 and female aged 50 to 65 without previous cardiovascular events, participating in the Lithuanian High Cardiovascular Risk primary prevention program. We performed a multiple linear regression on cIMT and WLR incorporating traditional and less traditional cardiovascular risk factors.

Results: Mean left and right cIMT was 0.66 ± 0.12 mm and 0.65 ± 0.11 mm respectively, whereas mean WLR was 0.092 ± 0.015. We found that cardiovascular risk factors could explain 8.9% of left cIMT and 8.3% of right cIMT. Strikingly, traditional and less traditional factors (namely age, male sex, LDL/HDL ratio, mean arterial blood pressure and triglyceride) contributed to a significantly larger proportion of WLR variance, amounting to 14.2%.

Conclusions: Adjustment for carotid lumen diameter in analyses evaluating common carotid artery intima-media thickness should be considered. The precise role of WLR as an ultrasound marker of subclinical atherosclerosis remains a topic of interest for future research.

P6.18 CARDIOVASCULAR TARGET ORGAN DAMAGE IN PREMENOPAUSAL SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS AND IN CONTROLS: ARE THERE ANY DIFFERENCES?

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Background: In patients with Systemic lupus erythematosus (SLE) a greater prevalence of structural and functional cardiovascular (CV) alterations has been described, possibly explaining the higher incidence of CV events, as compared to subjects matched for age and sex.

Aim of this study was to analyze the presence of target organ damage in premenopausal women with SLE and in controls matched not only for demographic characteristics but also for other cardiovascular risk factors.

Subjects and methods: 4 patients with SLE clinically stable (SLEDAI Score ≤ 6) and female aged 50 to 65 without previous cardiovascular events, participating in the Lithuanian High Cardiovascular Risk primary prevention program were synthesized from radial arterial pressure waves (applanation tonometry) by SphygmoCor (San Diego, CA, USA) were included.

Results: Mean cIMT was 0.66 ± 0.12 mm and 0.65 ± 0.11 mm whereas mean WLR was 0.092 ± 0.015. We found that cardiovascular risk factors could explain 8.9% of left cIMT and 8.3% of right cIMT.

Conclusions: Adjustment for carotid lumen diameter in analyses evaluating common carotid artery intima-media thickness should be considered.

P6.20 ROLE OF ALTERED VASCULAR REACTIVITY IN THE PATHOPHYSIOLOGY OF ACUTE MOUNTAIN SICKNESS

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Purpose: The aim of this study is to explore the physiological vascular adaptation to exposure to high altitude and to test the hypothesis that its impairment might play a role in the pathophysiology of acute mountain sickness (AMS).

Methods: 34 healthy volunteers (age 38 ± 11 years, 13 women) were studied at the sea-level and after passive ascent to 3842 m (Aiguille du Midi, France). Blood pressure (BP), O2 saturation (SO2), endothelial function (flow-mediated dilation, FMD), carotid distensibility coefficient (DC), carotid-femoral wave velocity (PWV), peak systolic velocity in the middle cerebral artery (MCA-PSV) were performed at sea level (T0) and after 4-h hypobaric hypoxia (T1). AMS was defined as a Lake-Louise Score > 5 after 24-h hypobaric hypoxia (T2).

Results: At T2 12 individuals developed AMS (AMS+). AMS+ had a greater SO2 desaturation at T1 as compared to AMS- (AMS+ 97.2 ± 1.2 to 79.3 ± 5.8%, AMS- 97.3 ± 1.2 to 83.1 ± 5.7%, p = 0.03), with similar heart rate increase and unchanged BP. FMD was significantly reduced in AMS+ (5.75 ± 3.01 to 2.7 ± 1.87%, p = 0.04), but not in AMS- (4.74 ± 2.47 to 4.02 ± 2.36%). Mean carotid diameter was increased at T1 in both groups. DC tended to be increased in AMS+ but not in AMS+, while PWV was unchanged. MCA-PSV was increased in AMS+, but not in AMS+.

Conclusions: In healthy asymptomatic individuals exposed to high altitude, conduit artery endothelial function is preserved in the cerebral distal vasodilation, increased elasticity and blood flow occurs. This compensatory response is early blunted in AMS+, before symptoms onset, thus suggesting a pathogenic role.

P7.1 INCREASED PLATELET REACTIVITY IS RESPONSIBLE OF MODIFICATIONS OF THROMBIN GENERATION IN PATIENTS WITH UNCONTROLLED ARTERIAL HYPERTENSION

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Methods: We studied 128 subjects with stage 1-3 arterial hypertension, mean age 51 ± 11 years, 48% males, BP = 141±24/87±13 mmHg, hypertension duration 10.1±8 years. Noninvasive central aortic BP and wave form characteristics (Alx and Alx corrected by heart rate of 75 bpm — Alx75) were synthesized from radial arterial pressure waves (applanation tonometry) by SphygmoCor®. Brachial BP was obtained by an automatic device (OMRON®).

Results: Brachial systolic BP was higher (145±26 vs. 136±20 mmHg, p = 0.04) and, weight (76.2±14 vs. 86.4±13.2, p = 0.01) and height (1.59±0.06 vs. 1.7±0.08, p = 0.01) were lower in females than in males. Central systolic BP (137±30 vs 125±23 mmHg, p = 0.01), Alx57(29.7±9.8 vs 19.5±11.7, p = 0.01), Alx57(29.6±6.9 vs 18.0±9.3, p = 0.01) were higher in females, even after adjustments for weight, height and systolic BP. Postmenopausal status was present in 70% of females and mean age of menopause beginning was 47.8 years. Women at postmenopausal status older than 48 years showed worse Alx(35.3 ± 9.4) than younger women(26.8 ± 8.9) and also than men(23.2 ± 12.4) at same age(0.05).

Conclusions: Hypertensive females have higher brachial and central systolic BP than hypertensive males. Arterial stiffness is higher in hypertensive females than in men, at all ages, and in postmenopausal status is worse than in fertile period.

Abstracts