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P1.45: GAMMA-GLUTAMYLTRANSFERASE - ANOTHER MARKER OF THE CARDIOVASCULAR RISK AND EARLY ARTERIAL DAMAGE?

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Conclusions: 1- Subclinical vascular disease is more frequent and severe in HT patients.2- Indicators of subclinical vascular disease in this subset of p. allow a more precise diagnosis of subclinical vascular. (ESC/ESH guidelines 2007)3-Vascular score of severity is higher in HT p. than in NT.

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GAMMA-GLUTAMYLTRANSFERASE - ANOTHER MARKER OF THE CARDIOVASCULAR RISK AND EARLY ARTERIAL DAMAGE?

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Purpose: The aim of the study was to evaluate whether gamma-glutamyl-transferase (γ-GT) is the marker of the cardiovascular (CV) risk assessed by the SCORE system and early arterial damage.
Methods. Serum levels of γ-GT, lipid profile, inflammatory markers and plasma glucose of 209 subjects (40-65 years old, 97 males) without clinically overt cardiovascular disease were checked. CV risk was evaluated by SCORE system. Parameters of arterial stiffness — aortic augmentation index (AIx/HR) and carotid-radial pulse wave velocity (PWV) - were obtained by applanation tonometry. Endothelium-dependent flow-mediated dilatation (FMD) in the brachial artery and carotid IMT were assessed using high resolution B-mode ultrasonography.
Results: We found that SCORE system is associated with the γ-GT. SCORE risk significantly increased with each quartile of γ-GT (ANOVA, $p=0.003$). γ-GT was significantly higher in high ($\geq$5%) vs. low (<5%) CV risk groups (43.82$\pm$48.31 vs. 24.55$\pm$22.66, $p<0.0001$). In the univariate analysis γ-GT was significantly associated with the FMD in the brachial artery ($p=0.025$), carotid-radial PWV ($p=0.042$) and the presence of the carotid plaques (CP) ($p=0.002$). The multiple regression analysis revealed that only gender (beta = -0.28, $p<0.001$), age (beta = 0.301, $p<0.001$) and triglycerides (beta = -0,147, $p=0.046$) were associated with FMD. PWV was independently associated with gender (beta = -0.319, $p<0.001$), glucose (beta = 0.248, $p=0.001$) and age (beta = 0.218, $p=0.003$).
Conclusions: The study suggests that serum γ-GT is a surrogate marker of CV risk. Elevation of γ-GT is associated with the increased endothelial dysfunction, arterial stiffness and carotid plaques, but not in the independent manner.

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INTIMA-MEDIA THICKNESS VARIATION AS PREDICTOR OF ATHEROSCLEROSIS

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Background: The aim of the present study was to ascertain in vascular diseased patients the morphological characteristics of the common carotid artery (CCA), i.e. intima-media thickness (IMT) and IMT ipsi- and bilateral intrasubject variation (DIMT) and to relate them to the carotid bulb stenosis degree score to establish the relevance of each parameter.
Methods: In 154 patients, referred to the vascular laboratory for CCA examination (mean 66 years, 48% male), the carotid bulb was visualized in Doppler-mode to rate the stenosis degree based on blood flow velocities. CCA IMT and ΔIMT were measured using multiple M-mode images (covering 3 heart beats). The association of morphological characteristics with stenosis degree was evaluated with Pearson correlation (r).
Results: Ipsi- and bilateral ΔIMT were stronger associated to stenosis degree score ($r=0.67$ and $r=0.60$, respectively, with $p<0.001$) than IMT ($r=0.40$, $p<0.001$). The averaged IMT increased slightly for stenosis degree<5 and abruptly for the two highest values ($r=0.93$, $p=0.001$). Mean ipsi- and bilateral ΔIMT presented a consistent graded increase with stenosis degree over the entire range (0-7), reaching a correlation close to 1 ($r=0.98$ and $r=0.97$, respectively, $p<0.001$).
Discussion: Although CCA is a region less prone to plaques, the morphological characteristics of CCA are positively correlated with stenosis degree score. The present study indicates that ipsi- and bilateral ΔIMT exhibit a stronger relation than IMT to the severity of carotid artery stenosis, underlining that ΔIMT carries different information than IMT. In conclusion, in the CCA, ΔIMT rather than IMT substantiates patient risk evaluation.

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CORRELATION BETWEEN INDICES OF ARTERIAL STIFFNESS AND ESTIMATES OF CARDIOVASCULAR EVENTS: PROMOTING CARDIOVASCULAR RISK STRATIFICATION IN CLINICAL PRACTICE

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Background: Aortic and carotid stiffness are independent predictors of all cause, cardiovascular, and cerebrovascular morbidity and mortality in several clinical conditions as well as in the general population.
Aim of the study: was to investigate the associations between non-invasively determined aortic and carotid artery stiffness with vestimates of absolute cardiovascular (CV) risk in healthy subjects and subjects with risk factors.
Materials: 139 subjects were recruited [104 with one or more CV risk factors (cases: 46 males, mean age 49 years), 35 healthy controls (16 males, mean age 43 years)]. Common carotid artery stiffness was investigated by an ultrasound system with wall track option (Aloka SSD-5500, Tokyo), providing a single point local wave speed (WS). Aortic stiffness was estimated by the carotid-femoral pulse wave velocity (CF-PWV) (Complior, Paris). Ten-year absolute CV risk was estimated using both the Framingham risk score (FRS) chart and the Edinburgh University Risk Chart (EURC, including echocardiographic left ventricular hypertrophy).
Results: Cases had significantly ($p<0.001$) higher CF-PWV (10.5$\pm$2.2 vs 8.6$\pm$1.3 m/s), WS (7.6$\pm$1.4 vs 5.8$\pm$0.8 m/s), FRS (10.8$\pm$10.2 vs 3.1$\pm$3.1%), and EURC score (21.5$\pm$16 vs 6$\pm$5%). Significant positive correlations ($p<0.001$) were observed for CF-PWV and WS with FRS ($r=0.56$ and 0.52, respectively) and EURC score ($r=0.64$ and 0.61, respectively). When subdividing CF-PWV and WS in tertiles a significant intertertile difference was observed only for progressively increasing values of EURC score.
Conclusions: indices of subclinical cardiovascular involvement obtained by an integrated ultrasonographic investigation may help to promote CV risk stratification in clinical practice.

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AORTIC DISSECTIONS: WHY A PATIENT HAS TO WAIT (MOSCOW-BASED RETROSPECTIVE STUDY)

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Aortic dissections (AD) are considered among most serious life-threatening conditions requiring emergency medical intervention. However, delays in recognition and treatment often occurred.
Our aim was to determine mean time intervals between 1) fist symptoms appearance (diagnostic delay, DD), 2) first contact with a doctor (Doctor-related delay, DRD) and final establishing of a confirmed diagnosis.
We analyzed 37 cases of patients admitted to general hospital with AD (84.6% males, mean age — 58.3 years).
Type A AD occured in 58.9% cases, type B - in 41.1%. The most frequent risk factors were atherosclerosis and hypertension, 94.8%. We identified 1 case of Marfan syndrome and 1 case lues tertiariai. Thoracic pain was observed in all cases: 38% patients complained of back pain and 84,6 % of anterior chest pain. Abnormal pulsation and murmurs were found in 33.3% and 25.6% of patients respectively. The DD was 1-23 days (mean 12.4), DRD was 1- 16 days (mean 9.5).DD and DRD were significantly increased in patients of 70 years of age and older and in patients with combined pathology, including coronary heart disease ($p<0.043$, $p<0.14$ respectively).
Majority of the DD and DRD delays were due to either masked symptoms or blurred clinical picture, or inadequate use of existing diagnostic facilities. More attention should be paid to postgraduate continuous medical education both of GPs referring patients to a hospital and of hospital-based staff.

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EVALUATION OF ARTERIAL STIFFNESS AND CARDIOVASCULAR RISK STRATIFICATION IN A GENERAL POPULATION IN NORTHERN ITALY. THE VOBARNO STUDY

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Hypertension guidelines underline the importance of quantification of total cardiovascular(CV)risk;an extensive evaluation of target organ damage