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### **P7.07: BLOOD PRESSURE CONTROL AND EARLY COGNITIVE IMPAIRMENT SCREENING**

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## P7.05

**DETERMINATION OF THE BEST ANKLE BRACHIAL INDEX THRESHOLD VALUES FOR THE ROUTINE DETECTION OF A SIGNIFICANT LOWER LIMB ARTERIAL STENOSIS USING AN AUTOMATED DEVICE**

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**Objectives:** To assess the prevalence of significant lower limb arterial stenosis in a population of patients with an increased cardiovascular risk and to determine the best ankle brachial index (ABI) threshold value for its detection.

**Methods:** In patients with treated hypertension and/or another cardiovascular risk factor (dyslipidemia, current smoking, diabetes), ABI was measured using an automated oscillometric device with 2 synchronized cuffs (SCVL®, Genov, Paris). The presence of atherosclerotic plaques was assessed independently by a Doppler/ultrasound exam.

**Results:** We included 201 patients. Fifty two percent were men, of 58 ±13.4 years old. Fifty six percent were treated for hypertension, 23% for diabetes and 72% had dyslipidemia. There was 21 % of current smokers and 33% of previous smokers. A clinical peripheral arterial disease (PAD) was noted in 7 % of the patients and the presence of a femoral stenosis > 50% in 7.7%. The prevalence of an ABI < 0.9 was 19.7% and 16.6% for an ABI <0.85. The ABI performance to detect a significant femoral plaque or a clinical PAD is detailed in the table. The best predictors of the presence of a PAD or a significant plaque are one of the 3 following ABI values : <0.85 or >1.30 or missing signal. **Conclusion:** In our population, the prevalence of a significant inferior limb stenosis was 7.7%. The ABI was easily and quickly measured by the automated device. Our study attests the feasibility of this approach to detect PAD and arterial stenosis in daily practice in this population.

	Sensibility (%)	Specificity (%)	Positive predictive value (%)	Negative predictive value (%)
ABI < 0.9	83.3	84.5	26.3	98.7
ABI <0.9 or > 1.3 or missing signal	93.3	83.4	31.8	99.3
ABI <0.85	83.3	87.8	31.3	98.8
ABI <0.85 or > 1.35 or missing signal	93.3	87.3	37.8	99.4

## P7.06

**GENDER DIFFERENCE IN CARDIOVASCULAR RISK: ROLE OF BLOOD PRESSURE AMPLIFICATION**

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Carotid (C) pulse pressure (PP) is constantly lower than brachial (B) PP, but is a more powerful predictor of CV risk than B-PP. The C/B-PP ratio is marker of PP amplification. The objective was to explore whether the role of C/B-PP ratio for all-cause and CV mortality is different between men and women. Population was composed of 72,437 men (41.0±11.1 years) and 52,714 women (39.5±11.6 years) with similar mean arterial pressure. C-PP was calculated in both genders from a validated equation. The hazard ratios (HR, 95% CI) associated with C/B ratio for all-cause and cardiovascular (CV) mortality were calculated with Cox regression models according to age and gender. The age threshold of 55 years was chosen to study the role of menopause. During a 12-year follow-up, 3028 men and 969 women died. The adjusted risk (HR) associated with C/B ratio for all-cause mortality was 1.51 (1.47-1.56) in men and 2.46 (2.27-2.67) (p<0.0001) in women; for CV mortality it was 1.81 (1.70-1.93) and 4.46 (3.66-5.45) (p<0.0001), respectively. The difference between genders for CV mortality increased after 55 years of age, from 1.44 (1.31-1.58) for men vs 3.19 (2.08-4.89) for women <55 years, to 1.65 (1.48-1.84) for men vs 5.60 (4.17-7.50) for women ≥55 years. Over 55 years, impact of C/B ratio was highly significant in men and women (p<0.0001).

C/B-PP amplification is highly predictive of differences in CV risk between men and women. Among women, after menopause, the attenuation of amplification associated with aortic stiffness strongly contributes to increasing cardiovascular risk.

## P7.07

**BLOOD PRESSURE CONTROL AND EARLY COGNITIVE IMPAIRMENT SCREENING**

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**Purpose:** The purpose of this study is to find whether achieving optimal blood pressure (BP) control could prevent mild cognitive impairment (MCI), and whether we should conduct MCI screening routinely in patients (Pts) with hypertension (HT).

**Methods:** 51(34.5%) males and 97(65.5%) females - a total of 148 Pts with mean age 64.16±11.18 years and mean HT history 13.1±11.05 years were examined. Neuropsychological profile was assessed with Mini-Mental State Examination (MMSE) and Montreal Cognitive assessment (MoCA). Ambulatory blood pressure monitoring (ABPM) and Self measured blood pressure (SMBP) were conducted according to the ESC/ESH recommendations.

**Results:** 76(51.35%) Pts with HT treatment were with suboptimal BP control during the day and 83(55.4%) - during the night. Mann-Whitney test was used to find: significant (p<0.05) difference in the mean values of MMSE and MoCA between the groups with optimal and suboptimal SMBP; some of the ABPM values between Pts with MCI and without. Regression analysis showed that there is significant (p<0.05) correlation between neuropsychological tests' results and some BP variables: MMSE - night systolic (r=0.274), mean (r=0.193) and pulse pressure (PP) (r=0.281); day systolic (r=0.179) and PP (r=0.313); systolic (r=0.209) and PP SMBP (r=0.212). MoCA with night

systolic (r=0.168) and PP (r=0.210); systolic (r=0.238) and PP SMBP (r=0.217).

**Conclusions:** Despite treatment opportunities and early detection of HT a significant percent of Pts with HT have poor BP control (assessed by SMBP or ABPM). They remain at risk for MCI. Screening neuropsychological tests should be performed in all Pts with HT and suboptimal BP control.

## P7.08

**PRECLINICAL MARKERS OF CAROTID ATHEROSCLEROSIS AND CARDIOVASCULAR RISK ASSESSED BY THE ESH/ESC SCALE (2003, 2007)**

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**Objective:** The SCORE scale is applied to assess the total cardiovascular risk. Risk stratification system of Recommendations (ESH)/(ESC) (2003, 2007) unlike the SCORE scale allows to give a more accurate assessment of the risk range with using results of tool methods of investigation.

**Aim:** To assess the degree of cardiovascular (CV) risk adjustment in patients with low and moderate risk by the SCORE scale, who were further examined in accordance with the ESH/ESC scale (2003,2007), and also underwent carotid duplex ultrasound studies.

**Material and methods:** 600 patients with low and moderate cardiovascular risk by the "SCORE" scale were selected: 445 women and 155 men in the age 30-65y. We used duplex ultrasound imaging of carotid arteries.

**Results:** Risk stratification has been accomplished according to the scale of ESH/ESC (2003, 2007) Recommendations and applying the data of the carotid duplex ultrasound imaging. Among 600 patients only 35% patients were remained in the low risk group, 33% patients in the moderate risk group and 31% patients were converted into the high risk group. The reason for