tion index corrected for heart rate (AIx75). Based on these measurements the annual absolute changes were calculated.

Results: Subjects with hypertension or dyslipidemia had a gradual higher annual progression of cfPWV compared to subjects without hypertension [0.281 m/s/year (95% CI:0.183–0.379) versus 0.102 m/s/year (95% CI:0.020–0.185), P = 0.013] and subjects without dyslipidemia [0.285 m/s/year (95% CI:0.181–0.390) versus 0.130 m/s/year (95% CI:0.060–0.199), P = 0.017]. Annual progression of AIx75 based on presence of hypertension or dyslipidemia was not statistically significant. However, when only subjects < 55 years where considered the progression rate was significantly higher in subjects with dyslipidemia compared to subjects without dyslipidemia [2.98%/year (95% CI:2.05–3.09) versus 1.22%/year (95% CI:0.68–1.75), P = 0.002].

Conclusions: The presence of hypertension and dyslipidemia is associated with accelerated progression of vascular stiffening in the general population.

PP.20.33 CENTRAL BLOOD PRESSURE: 3-YEAR FOLLOW-UP OF MILD HYPERTENSIVE PATIENTS

N. Tandurella, M. Agostinis, L. Tavecchia, C. Mongiardi, S. Moretti, C. Gadaleta, V. Ferrari, L. Guasti, A. Bertolini, A.M. Grandi, A.M. Maresca. *Ospedale di Circolo e Fondazione Macchi, Department of Internal Medicine, Varese, ITALY*

Objective: Many cross-sectional studies have showed that central blood pressure (CBP), measured by applanation tonometry (AT) appears better related to target organ damage (TOD) than ambulatory blood pressure (ABP). The objective of this longitudinal study was to evaluate the association between changes in CBP and subclinical TOD in mild hypertensive patients.

Design and method: We enrolled 30 patients (mean age 45.2 ± 6.8, 60% males) affected by mild hypertension (HT) without cardiovascular diseases or diabetes, never treated with antihypertensive drugs and 30 control subjects (NT) matched for age, gender and body mass index (BMI). For every subject, at baseline and at 3-year follow-up, we measured office blood pressure (OBP), ABP by 24-hour blood pressure monitoring, CBP and pulse wave velocity (PWV) by applanation tonometry; we also obtained anthropometric, metabolic, inflammatory, echocardiographic and carotid parameters. During the 3 years of follow-up, almost 60% of patients started antihypertensive drugs, according to their general practitioner.

Results: During the 3 years of follow-up, HT showed a reduction in systolic and diastolic ABP (-6 ± 9 /−4 ± 6 mmHg, p = 0.001 / 0.001) and CBP (−6 ± 15 / −5 ± 11 mmHg, p = 0.021 / 0.007) while NT had no significant changes of these parameters. Indexed left ventricular mass (LVM) and carotid intima-media thickness (IMT) showed a reduction in HT (LVM: −3 (−5; −1) g/m2.7 p = 0.017; IMT: −0.13 (−0.16; −0.10) mm, p = 0.001) while in NT such parameters showed no significant changes. ABP was significantly correlated to LVM (SBP: r = 0.263; p = 0.042 PP: r = 0.388; p = 0.002) and PWV (SBP: r = 0.263, p = 0.043; DBP: r = 0.260, p = 0.045), while CBP was not associated to variations of the same parameters.

Conclusions: In this longitudinal study CBP appears not related to changes in LVM and PWV, while ABP correlated to changes in LVM and PWV. In our study ABP but not CBP predicts variations of subclinical cardiac and vascular TOD in mild hypertensive patients.

PP.20.34 VASCULAR STIFFNESS ESTIMATED BY CAVI INDEX: SEARCHING FOR AGE CUT-OFF VALUES FOR RUSSIAN POPULATION

A. Alieva [1], O. Rotar [1], A. Orlov [1], M. Boyarinova [1], E. Vasilieva [1], V. Solntsev [1], E. Baranova [1], A. Rogoza [2], A.O. Konradi [1], E. Shlyakhto [1]. *[1] North-West Federal Medical Research Centre, Saint Petersburg, RUSSIA, [2] Russian Cardiology Research and Production Complex, Moscow, RUSSIA*

Objective: Vascular stiffness is considered to be a reliable marker of cardiovascular risk. Gold standard method of the arterial stiffness assessment – applanation tonometry - is technically complicated, observer-related; measurements are blood pressure (BP) dependent, thus, novel techniques are now under discussion, the cardio-ankle vascular index (CAVI) in particular. Application of accepted cut-off value of 9,0 can lead to misestimation of age-related differences. The aim of our study was to estimate cut-off values for CAVI in different age-groups of Russian population.

Design and method: 1336 apparently healthy participants aged 25–65 years were randomly selected from Saint-Petersburg inhabitants (a sample form ESSE-RF study). All participants signed informed consent and filled in the questionnaire regarding risk factors, concomitant diseases and therapy. Fasting lipids, glucose (Abbott Architect 8000 (USA)) and BP measurement were performed. From whole cohort a group of healthy subjects (288) without CVD, dyslipidemia, hypertension and diabetes mellitus was selected. CAVI was measured by VaSera VS-1500 (Fukuda, Japan).

Results: In our sample 175 of patients (13%) had CAVI value higher than accepted cut-off 9,0. Calculated regression equation CAVI = 5,29 + age*0,047 we transformed to CAVI = 6,70 + 0,047*age for including of 13% of pathological cases (87% percentile) in every age group. The cut-off values of CAVI for different age groups in healthy subjects in total population-based sample were calculated (Table 1).

Age, years	CAVI cut-off value
20-30	7,88
30–40	8,35
40–50	8,82
50–60	9,29
60–70	9,76

Conclusions: Application of CAVI cut-off values according to age groups may promote to more precise detection of subclinical vascular damage – to prevent underestimation in younger age and overestimation in older age groups.

PP.20.35 CARDIO-ANKLE VASCULAR INDEX (CAVI) AND QUALITY OF LIFE EVALUATED USING THE SF-12 QUESTIONNAIRE. MARK STUDY

L. Garcia-Ortiz [1], R. Ramos-Blanes [2], E. Ramos-Delgado [1], J.I. Recio-Rodriguez [1], A. Gil-Gregorio [1], S. Santos-Polo [1], F.J. Hernandez-Juanes [1], I. Alba-Perez [1], L.M. Martinez-Martinez [1], M.P. Moreno-Gonzalez [1], C. Rodriguez-Martín [1], C. Castaño-Sanchez [1], J.A. Iglesias-Valiente [1], C. Martin-Martin [1], M.P. Gonzalez-Barez [1], I.S. Ramos-Carrera [1], M. Hernandez-Hernandez [1], S. Gonzalez-Sanchez [1], N. Sanchez-Aguado [1], R. Alonso-Dominguez [1]. *[1] IBSAL, Salamanca, SPAIN, [2] IDIAP Jordi Gol, Gerona, SPAIN*

Objective: To analyse the relationships between Cardio-Ankle Vascular Index and quality of life in patients with intermediate cardiovascular risk.

Design and method: We performed a cross sectional study including 500 subject, aged 30 to 75 years (mean: 60.31 ± 8.44), 54.4% men, without cardiovascular diseases from the MARK study, selected by consecutive sampling from a Spanish health centre. Measurement: Cardio-AnkleVascular Index (CAVI) by VaSera device (Fukuda Denshi). Quality of life evaluated using the SF-12 questionnaire.

Results: The CAVI mean was 8.59 ± 1.03, in men 8.62 ± 1.16 and in women 8.55 ± 1.03 (p > 0.05). The 29.3% were less than 8 (normal), the 36.6% were between 8 y 9 (border line) and the 34.1% were equal or higher than 9 (Atherosclerosis probably). The SF12 results were: Physical function 50.7 ± 9.0; Role physical 50.9 ± 9.2 Bodily pain 49.8 ± 1.7; General health 39.9 ± 8.9; Vitality 51.1 ± 1.1; Social functioning 49.9 ± 9.8; Role emotional 48.9 ± 9.7; Mental health 49.7 ± 10.5; Standardized Physical component 48.4 ± 9.3; Standardized Mental component 49.5 ± 10.5.

Standardized Physical component in subject with CAVI < 8 was 46.53 ± 11.02; 8–9: 48.44 ± 9.39 and > 9: 50.08 ± 7.09; p = 0.023. Standardized Mental component in subject with CAVI < 8 was 49.39 ± 10.88; 8–9: 51.67 ± 8.91 and > 9: 51.67 ± 8.91; p < 0.011.

CAVI was positively correlated with Physical function (r = 0.168, p = 0.003), Role physical (r = 0.180, p = 0.001), Bodily pain (r = 0.192, p = 0.001), General health (r = 0.118, p = 0.037), Social functioning (r = 0.119, p = 0.037), Mental health (r = 0.157, p = 0.006) and Standardized Physical component (r = 0.178, p = 0.002), but not with Standardized Mental component (r = 0.082, p = 0.149).

In multiple lineal regression analysis(GLM), considering CAVI as independent variable and adjusted by age, sex, statin and antihypertensive drugs, remained statistical signification Physical function (Beta 1.872, p = 0.001), Role physical (Beta 1.275 p = 0.024), and Standardized Physical component (Beta 1.667, p = 0.004).

Conclusions: The Cardio-Ankle Vascular Index is directly associated with Physical function, Role physical and Standardized Physical component but not with Mental components of quality of life questionnaire. Future studies are needed to clarify this unexpected finding.

PP.20.36 CAROTID ARTERY PHENOTYPING USING HIGH-RESOLUTION RADIOFREQUENCY–BASED ECHOTRACKING SYSTEM IN PATIENTS WITH MULTIFOCAL FIBROMUSCULAR DYSPLASIA. A CROSS-SECTIONAL STUDY

H. Khettab [1], A. Lorthioir [2], R. Niarra [3], Y. Chambon [2], X. Jeunemaitre [5], P.F. Plouin [4], S. Laurent [1], P. Boutouyrie [1], M. Azizi [2]. *[1] Department of Pharmacology, HEGP, Paris, FRANCE, [2] Clinical Investigation Center, HEGP, Paris, FRANCE, [3] Clinical Research Unit, HEGP, Paris, FRANCE, [4] Hypertension Unit, HEGP, Paris, FRANCE, [5] Departement of Genetic, HEGP, Paris, FRANCE*