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### **P7.2: VERY EARLY CLINICAL VASCULAR AND HEART MARKERS OF NEWLY RECOGNIZED HYPERTENSION IN MIDDLE AGE ADULTS**

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**Objective:** The aim of this study was to evaluate the thrombin generation (TG) in patients with uncontrolled arterial hypertension (AHT).

**Patients and methods:** We prospectively examined 27 patients with uncontrolled AHT at the emergency department of the medical center of Mainz, and 26 age match controls. TG was measured by calibrated automated thrombography (CAT) in platelet rich and platelet poor plasma (PRP/PPP).

**Results:** AHT patients had an increased systolic blood pressure, compared to control patients ( $182 \pm 10.7$  versus  $134 \pm 9.6$  mmHg); age, BMI and weight were not different. Unexpectedly, CAT assay performed in PPP showed a decreased of TG in uncontrolled AHT patients ( $1269 \pm 55$  versus  $1444 \pm 51$  nM.min) as well as a decrease in the peak of generation. The TG performed in PRP was identical between uncontrolled AHT and control patients ( $1550 \pm 65$  versus  $1513 \pm 58$  nM.min), but the peak of generation, as well as the velocity, were increased in uncontrolled AHT patients. In both groups, TG was reduced by blocking the apple 3 domain of FXI, indicating an involvement of the FXI thrombin loop in thrombin generation in PRP of uncontrolled AHT patients.

**Conclusion:** These results point out the important role of platelet overreactivity in hypertension. Monitoring the prothrombotic state of platelets might add to risk stratification of patients with AHT.

## P7.2

### VERY EARLY CLINICAL VASCULAR AND HEART MARKERS OF NEWLY RECOGNIZED HYPERTENSION IN MIDDLE AGE ADULTS

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The aim of this study was to evaluate vascular and echocardiographic markers of hypertension (HT) in subjects with newly diagnosed HT before treatment started.

We studied 32 patients with newly diagnosed HT without pharmacological therapy (HT group) and 31 healthy ones (control group). ABPM were performed to exclude or confirm HT. Cardiovascular risk factors and pulse wave velocity (PWV) were assessed. Measurements of left ventricle, size of left atrium and parameters of diastolic function of left ventricle were measured using echocardiography. The student's T-test, U Mann-Whitney and Chi2 tests were used to compare differences between groups.

There were no significant differences in cardiovascular risk factors (sex, age, total cholesterol level, HbA1c) between groups with exception of BMI ( $p < 0.05$ ). We observed significant differences between HT group and control group in PWV, LVMI, LAVI, IVSd, LVIDD, LVPWd, E/A, E/E', although there were no such differences in IVRT, DcT and E'.

#### Control group

N=31

HT group

N=32

Men, n[%]

12[39]

19[59]

Age[year]

45±10

44±12,5

BMI[kg/m<sup>2</sup>]\*

24±3,5

28,5±4,0

SBP[mmHg]\*

119,4±9,5

142,3±15,0

DBP[mmHg]\*

81,1±8,8

97,6±11,1

Total cholesterol[mmol/l]

5,1±1,0

5,5±0,9

HbA1c[%]

5,4±0,4

5,5±0,4

PWV[m/s]\*

8,7±2,0

10,2±2,6

LVMI[g/m<sup>2</sup>]\*

83,1±18,4

96,3±24,7

IVSd[mm]\*

9,4±1,8

10,7±2,0

LVIDD[mm]\*

46,4±4,4

49,4±4,7

LVPWd[mm]\*

9,2±1,7

10,7±1,7

LAVI[ml/m<sup>2</sup>]\*

16,9±6,2

22,2±6,5

IVRT[s]

0,097±0,024

0,094±0,017

DcT[s]

0,293±0,078

0,266±0,083

E/A\*

1,3±0,3

1,1±0,3

E'[m/s]

10,7±2,1

9,2±3,3

E/E\*\*

8,3±2,3

9,7±2,7

\*-p<0,05

In the study group, increase in pulse wave velocity concomitant with changes in diastolic function characterize middle age patients with newly diagnosed hypertension. It is difficult to separate the effect of high blood pressure from the importance of overweight.

## P7.3

### RISK FACTORS CONTROL IN ELDERLY PATIENTS WITH PERIPHERAL ARTERY DISEASE

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**Objective:** The assessment of control of modifiable risk factors among elderly patients with peripheral artery disease (PAD) admitted to the hospital angiology ward.

**Methods:** The results of treatment of dyslipidemia (DL), hypertension (HT), diabetes mellitus (DM) and prevalence of cigarette smoking were assessed among older (>65 years old, group I) and younger patients (group II) with PAD in a admission day to hospital. Statistical analysis was performed with U Mann-Whitney and Chi<sup>2</sup> tests.

**Results:** The study population included 154 patients (I – 92 and II – 65 subjects) aged  $67,4 \pm 9,4$  years, 69,5% men. The study groups presented similar grades of PAD classification by Rutherford. Group II was older ( $73,5 \pm 6,4$  vs  $58,3 \pm 4,7$  yrs), had lower frequency of current smokers (21,7 vs 48,4%) than groups II. Diagnosis of DL, HT and DM were equally frequent in both groups. However, coronary heart disease was diagnosed more frequently in group I than II (52,2 vs 29,0%). Both groups were similar according to systolic blood pressure (BP) values and levels of glucose and HDL cholesterol. Group I had lower diastolic BP than group II ( $69,5 \pm 11,1$  vs  $74,0 \pm 9,9$  mmHg), but control of HT was similar in both groups (71,7 vs 67,7%). LDL cholesterol were lower in a group I than II ( $2,2 \pm 1,0$  vs  $2,5 \pm 1,1$  mmol/l), but LDL cholesterol values < 1,8 mmol/l were observed with similar frequency in both groups (40,2 vs 27,4%).

**Conclusions:** Elderly patients with PAD presented slightly better control of modifiable risk factors than younger patients.

## P7.4

### MORNING CENTRAL BLOOD PRESSURE SURGE DOES NOT DIFFER BETWEEN MEN AND WOMEN

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