Results: Patients of II gr. had significantly lower BFV min in MCA, ACA, PCA (accordingly: MCA – 0.46 ± 0.03 vs 0.62 ± 0.04 m/s, p = 0.05, ACA – 0.34 ± 0.02 vs 0.45 ± 0.03 m/s, p = 0.05, PCA – 0.25 ± 0.01 vs 0.36 ± 0.02 m/s, p = 0.05) and significantly higher CVRI than pts of I gr. (accordingly: MCA – 169.21 ± 10.28 vs 130.47 ± 8.47 mmHg/m/s, ACA – 271.65 ± 21.32 vs 180.16 ± 20.25 mmHg/m/s, PCA – 407.12 ± 24.28 vs 252.03 ± 21.58 mmHg/m/s, p < 0.05). Changes of BFV max and mean were not significant. MoCA results were related to MCA BFV min (r = –0.46; p < 0.01), CVRI (r = 0.52; p < 0.05). The same relations were between MoCA results and BFV parameters of ACA and PCA. After adjustment for 24h SBP and DBP, 24h SBP, variability of nighttime SBP and DBP these relationships were not significant. Multiple regression analysis has shown that CVRI is predictor of cognitive impairment in pts with EH.

Conclusions: Cognitive function in patients with EH related to increase vascular resistance manifesting through decrease minimal blood flow and increase vascular resistance indexes in media, anterior, posterior cerebral arteries. These changes are caused by high 24h SBP and DBP, variability of nighttime SBP and DBP, low SBP 24h index. CVRI is predictor of cognitive impairment in pts with EH.

MPS 08-08 THE INFLUENCE OF WIRELESS SELF-MONITORING PROGRAM ON THE RELATIONSHIP BETWEEN PATIENT ACTIVATION AND HEALTH BEHAVIORS, MEDICATION ADHERENCE, AND BLOOD PRESSURE LEVELS IN HYPERTENSIVE PATIENTS: A SUBSTUDY OF A RANDOMIZED CONTROLLED TRIAL

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Objective: Smartphone technology using wireless monitoring tools are now widely available to help individuals monitor their blood pressure, but little is known under which conditions such technology can effect positive behavior changes or clinical outcomes. To study the influence of wireless self-monitoring program and patient activation measures on health behaviors, medication adherence, and blood pressure levels as well as control of blood pressure in hypertensive patients

Design and method: We examined a subset of 95 hypertensive participants from a 6-month randomized controlled trial designed to determine the utility of wireless self-monitoring program (n = 52 monitoring program, n = 43 control) which consisted of blood pressure monitoring device connected with iPhone, reminder for self-monitoring, online disease management program as well as mobile application for monitoring and education, compared with control group receiving standard disease management program. Study participants provided measures of patient activation, health behaviors including smoking, drinking and exercise, medication adherence, and blood pressure levels. We assessed the influence of wireless self-monitoring as a moderator of the relationship between patient activation and health behaviors, medication adherence as well as control of blood pressure.

Results: Improvements in patient activation were associated with improvements in cigarette smoking (β = –0.46, P < .001) and blood pressure control (β = 0.04, P = 0.02). This relationship was further strengthened in reducing cigarettes (β = –0.60, P < .001), alcohol drinking (β = –0.26, P = .01) as well as systolic (β = –0.27, P = .02) and diastolic blood pressure (β = –0.34, P = .007) at 6 months among individuals participating in the wireless self-monitoring program. No differences were observed with respect to medication adherence.

Conclusions: Participation in a wireless self-monitoring program provides individuals motivated to improve their health management an added benefit above and beyond that of motivation alone. Hypertensive individuals eager to change health behaviors are excellent candidates for health self-monitoring.

MPS 08-09 THE POLYMORPHISM IN ALDEHYDE DEHYDROGENASE-2 (ALDH2) GENE IS ASSOCIATED WITH MYOCARDIAL INFARCTION AND STROKE IN A CHINESE POPULATION

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Objective: Alcohol consumption has an important effect on coronary atherosclerotic heart disease (CAD). Acetaldehyde dehydrogenase 2 (ALDH2) is a key enzyme in alcohol metabolism. A G-to-A missense mutation of ALDH2 gene, rs671, which causes a Glu > Lys (504) substitution, was performed to detect the association with CAD and other relative diseases, but the results were not conclusive. The purpose of the present study was to determine whether this locus confers significant susceptibility to myocardial infarction and stroke in a Chinese population.

Design and method: We conducted two case–control association studies (one cohort of 2325 myocardial infarction patients and 2620 unrelated controls, another cohort of 3960 stroke patients and 3654 controls) from the Chinese population. Genotyping of the rs671 SNP was performed by the TaqMan Real Time PCR method.

Results: We found that rs671 (G allele) was significantly associated with myocardial infarction (odds ratio 1.21, 95% CI: 1.088–1.337, p = 0.00027, additive model), and logistic regression result indicated that the polymorphism was not associated with alcohol consumption and other risk factors. However, rs671 (G allele) showed a protective effect on stroke patients without drinking (odds ratio 0.82, 95% CI: 0.741–0.908, p = 0.00033, additive model), and no relationship was observed between SNP and stroke in patients with drinking.

Conclusions: Our results indicate that, in the Chinese population, the ALDH2 variant rs671 is a risk factor of myocardial infarction but a protective factor of stroke without alcohol consumption. The role and pathway of ALDH2 involving in these diseases need more researches.