HDL-C. All ultrasonic measures increased risk of MS in dose-dependent fashion. Reference values of 1.6 cm for PMF thickness, 7.0 cm for width, and 1.3 cm for SCF thickness were predictive for MS. Sonographic indicators are supposed to be screening 'non-lab' tool for central adiposity and MS detection.

PP.19.28 EFFICACY OF STANDARDIZED ALGORITHMIC TREATMENT FOR OFFICE AND HOME BLOOD PRESSURE CONTROL IN NORMAL-WEIGHT, OVERWEIGHT AND OBESE HYPERTENSIVES IN LONGITUDINAL REAL-LIFE STUDY

K. Amosova, I. Rudenko. *O.O. Bogomolets National Medical University, Kiev, UKRAINE*

Objective: To compare target office (<140/90mmHg) and normal home (<135/85mmHg) blood pressure (BP) attainment after 6 month (M) standardized algorithmic treatment and home BP monitoring (HBPM) of normal weight, overweight and obese uncomplicated hypertensives (UH) in longitudinal real-life BP control program.

Design and method: Per protocol cohort of PERFECT-BP prospective observational study (ISRCTN75706523) included 430 patients (pts) < 75 years (57.6 ± 0.5years) newly diagnosed (18,3%) or treated but uncontrolled (BP < 200/120 mmHg) UH. Pts and MDs (54 ambulatory cardiologists) were provided with standardized precalibrated automatic BP measurement devices with individually selected and universal cuff correspondingly. At visit 1, pts were given training and written instructions for HBPM and recording (twice per day for 7 consecutive days before each visit at day 7, M1, 2, 3, 6) and were prescribed or switched to perindopril/amlodipine fixed-dose combination (FDC) (doses at discretion of MDs). Step 2 was FDC uptitration, step 3 – plus indapamid-SR, step 4 – spironolactone, step 5 – moxonidine or doxasosine.

Results: Of participants, 33(7,7%) were normal weight, 190(44,2%) overweight and 195(45,3%) obese, data of 12(2,8%) pts were missed. Normal weight, overweight and obese pts did not differ in age, office systolic and diastolic BP level at baseline (165,4 ± 2,8; 165 ± 1,0; 166,7 ± 1,0mmHg and 97,9 ± 1,9; 96,8 ± 0,7; 97,6 ± 0,6mmHg respectively, all p > 0,05), but obese group compared to overweight had more females (118(60,5%) vs 90(47,4%), p < 0,05) and diabetics (47(24,1%) vs 13(6,8%), p < 0,01). At 6 M target office BP was attained in 25(75,8%), 159(83,7%), 157(80,5%) pts, normal home BP – in 21(63,6%), 131(68,9%), 118(60,5%) pts, both target office and normal home BP – in 21(63,6%), 123(64,7%), 110(56,4%) pts respectively (all p > 0,05). Among obese 76(39%) pts needed 3 or more drugs vs 5(15,1%) normal weight and 51(26,9%) overweight ones (all p < 0,05). Obese pts had higher office (132,5 ± 0,6 vs 129,2 ± 0,7mmHg, p < 0,05) and home (130,5 ± 0,6 vs 128,1 ± 0,6mmHg, p < 0,05) systolic BP at 6 M then overweight ones.

Conclusions: Weight status of UH didn't influence on 6 M results of standardized algorithmic treatment with HBPM for both office and home BP control, but obese pts required more antihypertensive medications compared to normal weight and overweight ones with similar baseline BP levels.

PP.19.29 RENAL DOPAMINE ALTERATION INCREASES NA+, K+-ATPASE EXPRESSION AND ACTIVITY AND CORRELATES WITH HYPERTENSION IN FRUCTOSE OVERLOADED RATS

A. Puyó [1], N. Rukavina Mikusic [1], N. Kouyoumdzian [1], C. Kravetz [2], J. Del Mauro [2], M. Pandolfo [3], H. Lee [1], H. Peredo [1], G. Cao [4], M. Gironacci [5], J. Toblli [4], B. Fernández [1], M. Choi [1]. *[1] University of Buenos Aires, Facultad de Farmacia y Bioquímica, Department of Biological Sciences, INFIBIOC, Buenos Aires, ARGENTINA, [2] University of Buenos Aires, Facultad de Farmacia y Bioquímica, Department of Pharmacology, INFIBIOC, Buenos Aires, ARGENTINA, [3] University of Buenos Aires, Facultad de Farmacia y Bioquímica, Department of Clinical Biochemistry, INFIBIOC, Buenos Aires, ARGENTINA, [4] Hospital Alemán, Buenos Aires, ARGENTINA, [5] University of Buenos Aires, Facultad de Farmacia y Bioquímica, Department of Biological Chemistry, Buenos Aires, ARGENTINA*

Objective: Metabolic and hemodynamic changes induced by fructose overload could be associated with a renal dopaminergic system impairment which may affect activity and expression of renal Na+, K+-ATPase contributing to sodium retention and hypertension. The objective of our study was to determine changes in renal dopamine (DA) production through the measurement of urinary L-dopa/DA index and its relationship with natriuresis, renal expression and activity of Na+, K+-ATPase and systolic blood pressure (SBP).

Design and method: Male Sprague Dawley rats were studied: a) Controls (C4, C8, C12: tap water to drink) and b) Fructose overloaded: (F4, F8, F12: 10% w/v of fructose solution to drink), treated during 4, 8 and 12 weeks (n = 8 rats/group/period). Urinary L-dopa and DA were determined by HPLC; diuresis and sodium were measured in 24 hour urine samples. SBP was determined by tail-cuff method. The specific activity of Na+, K+-ATPase and its protein expression were determined by enzymatic and immunofluorescence/western blot techniques, respectively.

Results: Fructose overload increased SBP (mmHg, C4: 121 ± 8 vs F4: 145 ± 1*; C8: 130 ± 4 vs F8: 161 ± 10#; C12: 133 ± 5 vs F12: 163 ± 4#), urinary L-dopa/DA index (C4: 0.49 ± 0.05 vs F4: 1.9 ± 0.09#; C8: 0.53 ± 0.06 vs F8: 2.35 ± 0.1#; C12: 0.54 ± 0.07 vs F12: 2.57 ± 0.2#) and decreased urinary sodium excretion. A positive correlation was observed throughout all the treatment period between SBP and urinary L-dopa/DA index (R2 = 0.7816, p = 0.002). These changes were accompanied by an increase in renal Na+, K+-ATPase activity (nmol/mg/min, C4: 120 ± 12 vs F4: 172 ± 16*; C8: 124 ± 16 vs F8: 186 ± 17*; C12: 140 ± 18 vs F12: 223 ± 21#) and its protein expression (arbitrary units, renal cortex: C8: 1.00 ± 0.03 vs F8: 1.94 ± 0.34*; medulla: C4: 1.00 ± 0.03 vs F4: 1.54 ± 0.02#; C8: 1.00 ± 0.02 vs F8: 1.39 ± 0.07#; C12: 1.00 ± 0.02 vs F12: 1.24 ± 0.10*). *p < 0.05, #p < 0.01.

Conclusions: Fructose overload leads to an increase in the urinary L-dopa/DA index from 4th week of treatment that correlates positively with SBP, along with an elevation in both, renal Na+, K+-ATPase activity and expression. These findings are in accordance with a decrease in natriuresis, postulating the L-dopa/DA ratio as a good index to evaluate an early renal dysfunction.

PP.19.30 THE RELATIONSHIP OF INSULINE RESISTANCE/INSULINE SENSITIVITY INDEXES AND CARDIOMETABOLIC RISK FACTORS IN OBESE HYPERTENSIVE PATIENTS

O. Pionova. *Kharkiv National Medical University, Kharkiv, UKRAINE*

Objective: investigation the relationship between insulin resistance/insulin sensitivity indexes and cardiometabolic risk factors in hypertensive patients (HTP) with abdominal obesity (AO) and pre-diabetes.

Design and method: 94 obese HTP on average age 54.45 ± 9.50 matched in age and sex were examined. Control group consisted of 21 healthy men aged on average 53.40 ± 11,80 years. All patients underwent clinical examination, assessment of carbohydrate and lipids metabolism and determine the level of apoproteins (Apo B and A-I). According to IDF criteria (2005) was diagnosed AO. Carbohydrate metabolism was evaluated according to IDF (2012), ADA (2010). Insulin resistance (HOMA - IR), β-cells function (HOMA-β) and insulin sensitivity (Gutt) indexes were calculated. The patients were divided into two groups depend on rate of waist circumference (WC).

Results: The range HOMA-IR index for controls was 2.27 ± 0.94, for HTP without AO 3.81 ± 2.33 and for obese HTP 4.52 ± 3.33, while Gutt index for controls was 169.51 ± 35.96, for HTP without AO 152.21 ± 62.22 and for obese HTP 139.5 ± 64.82. Pre-diabetes was detected in 20% HTP and 43.42% in obese HTP. Positive significant (p < 0.05) correlation between HOMA-IR and WC (R = 0.64), total cholesterol (TC) (R = 0.31) and low density lipoprotein cholesterol (LDL-C) (R = 0.5), and negative significant (p < 0.05) correlation with Gutt index (R = -0.99) in HTP has been revealed. Along with this, Gutt index was associated with WC (R = -0.63), TC (R = -0.55), LDL-C (R = -0.48), while HOMA-β index was associated with very low-density lipoprotein cholesterol (VLDL-C) (R = 0.47), and triglycerides (TG) (R = 0.53), p < 0.05. In obese HTP has revealed relationship between HOMA-IR and Gutt index (R = -0.96), between Gutt index and WC (R = -0.23), while HOMA-β index was associated with high density lipoprotein cholesterol (HDL-C) (R = -0.51), VLDL-C (R = 0.57), TG (R = 0.53), and apo B (R = 0.29), p < 0.05.

Conclusions: Insulin sensitivity is the lowest in hypertensive patients with abdominal obesity, specific gravity patients with pre-diabetes is greater. Insulin resistance, insulin sensitivity and β-cell function indexes are associated with waist circumference, total cholesterol, triglycerides and atherogenic lipoproteins. However, in hypertensive patients with abdominal obesity insuline sensitivity is associated with waist circumference, and just β-cells function index is associated with high density lipoproteins, triglycerides, very low density lipoproteins and apoprotein B.

PP.19.31 THE EFFECT OF HIGH NORMAL BLOOD PRESSURE ON APELIN AND VISFATIN PLASMA LEVELS

D. Papadopoulos [1], D. Perrea [2], E. Sanidas [1], T. Makris [3], I. Barbetseas [1]. *[1] ESH Excellent Center of Hypertension, Laiko Univesity Hospital, Athens, GREECE, [2] Laboratory of Experimental Surgery, Medical School, Athens, GREECE, [3] ESH Excellent Center of Hypertension, Elena Venizelou Maternity Hospital, Athens, GREECE*

Objective: High Normal Blood Pressure seems to be related to increased cardiovascular risk in healthy subjects, while hypoapelinemia and hypervisfatinemia may contribute to vascular damage accelerating atherogenesis.This study investigated whether plasma levels of apelin (known to regulating insulin resistance) and visfatin (may cause endothelial dysfunction and favor atherosclerosis development by stimulation of TNF release and deterioration of insulin resistance.) are affected in