Results: The prevalence of overweight (BMI 25-29 kg/m²) and obesity (BMI ≥ 30 kg/m²) was 36.0% and 26.4% in men and 38.1% and 30.4% in women. Mean SCORE I was 41.4 ± 11.4. Overweight and obesity affected 32% and 70% of men and 49.7% of women. Women at moderate CV risk by SCORE (≥40) were 27.3% and 1.2%, respectively, whereas at high risk (≥5%): Mean ASCVD risk was 4.8% in men and 1.0% in women. 38.6% of men and 1.6% of women had elevated ASCVD risk. In multiple ROC analysis, the largest AUC (0.695 ± 0.058) was seen in elevated SCORE risk (≥5%). Females' body fat percentage was found to be the best obesity marker for predicting risk. SCORE 1% AUC 0.066 ± 0.055. The optimal cut-off for WC and body fat for predicting CV risk were 0.59, 94 cm and 37%, respectively.

Conclusions: Overweight and obesity were common among urban employed population of Mongolia. We received statistical evidence supports the significance of abdominal obesity markers in men for detecting high CV risk by SCORE (95% high confidence interval: -0.59) and 2019 SCCA guidelines ( waist circumference > 94 cm) whereas in women the body fat % may be better indicator for elevated CV risk than anthropometric data.

RILMENIDINE TREATMENT IN POSTMENOPAUSAL HYPERTENSIVE WOMEN WITH METABOLIC SYNDROME

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Objectives: In postmenopausal women hypertension remains an important problem, and in general, the risk of CHD is significantly higher than in women at menopause. The last data suggest that atherosclerotic cardiovascular disease affects more than half women of this age. The objective of our study was to evaluate the efficacy of rilmenidine on blood pressure, left ventricular hypertrophy, and metabolic dysfunction in postmenopausal hypertensive women. Design and methods: We performed a prospective study, lasting 3 months, with 32 never-treated postmenopausal hypertensive grade 1 and 2 women with metabolic syndrome, aged between 45 and 72 years old, receiving once a day rilmenidine 1 mg. Cardiovascular and Doppler echocardiography was performed to all patients at baseline and after 3 months of therapy. The echocardiographic parameters assessed were: left ventricular mass index (LVMI), internal diastolic diameter (IDD), interventricular septal thickness (IVST), posterior wall thickness (PWT), early diastolic, mean mitral inflow velocity atrial induced velocity ratio (E/A), diastolic volumetric relaxation time (IVRT), and deceleration time (DT).

Results: Blood pressure was significantly reduced by treatment, both systolic (137.7 ± 3.2 vs 129.5 ± 1.5 mmHg, p = 0.01) and diastolic (85.2 ± 2.4 vs 83.2 ± 1.2 mmHg, p = 0.001). LVMI regression was observed in 27 women receiving rilmenidine (85.7% vs 91.4% in 3 months in 114 ± 11.5 ± mg, p = 0.01). Left ventricular diastolic function was improved in 38 women (86.8% in 0.99 ± 0.05 to 1.18 ± 0.03 in 0.05, p = 0.05). E/A ratio increased in 0.99 ± 0.05 to 1.38 ± 0.03 in 0.05, DT decreased from 138.2 ± 3 to 130.2 ± 2.5 m/s in 0.05 and 0.05, DT from 186 ± 3.7 to 170 ± 3.6 in 0.05.

Conclusions: Rilmenidine show high antihypertensive and cardiac protective effect in postmenopausal women with metabolic syndrome, reducing left ventricular hypertrophy and remodeling, and improving diastolic relaxation.

CACHETIN AND APPROPRIATE B IN HYPERTENSIVE PATIENTS WITH ABDOMINAL OBESITY, PRE-DM AND TYPE 2 DIABETES MELLITUS

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Objectives: To investigate the relationship between indicators of carbohydrate and lipid profiles in patients with hypertension and abdominal obesity (AO) and type 2 diabetes mellitus (T2DM). Design and methods: 222 HBP with obesity, pre-diabetes and T2DM on average age 57.35 ± 7.58 matched in age and sex and 21 healthy persons were examined. All participants underwent clinical examination, assessment of carbohydrate and lipid metabolism. Plasma concentrations of apo B, apo A1, and insulin were determined. The objective was to use the diagnosis of abdominal obesity (AO). Carbohydrate metabolism was evaluated according to IDF (2012), ADA (2010). The patients were divided into 5 groups depending on presence of AO and glucose metabolic profile.

Results: Means plasma apo B [g/l] and insulin (IU/l) were increased in T2DM HBP (n = 27) 12.0 ± 3.05 and 20.8 ± 5.8 (p < 0.001) compared to pre-diabetes HBP (n = 120) 9.9 ± 2.05 and 8.0 ± 2.01 (p < 0.001). Abs insulin (n = 100) 11.6 ± 27.7 and 14.28 ± 16.72 (p < 0.001) 12.0 ± 3.72 and 12.66 ± 11.54 (p < 0.001) and control (n = 16.0 ± 27.7 and 13.05 ± 2.5). AO was diagnosed in 88% of T2DM HBP and 66% of pre-diabetes HBP. Insulin resistance (IR) was identified in 92% of T2DM HBP, 53% of pre-diabetes HBP and 48% of HBP. In T2DM HBP apo B was correlated with insulin [R = 0.62, p < 0.001], fasting glucose [R = 0.52, p < 0.001], HOMA-IR [R = 0.66, p = 0.001] and T2N-s was correlated with HBA1c [R = 0.52, p < 0.001] and apo B [R = 0.73, p < 0.001]. In pre-diabetes HBP apo B was correlated with insulin [R = 0.51, p < 0.001], HBA1c [R = 0.49, p = 0.001], apo B [R = 0.28, p < 0.001]. In HBP apo B was correlated with insulin [R = 0.51, p < 0.001], HOMA-IR [R = 0.57, p < 0.0005] and T2N-s was correlated with very low-density lipoprotein cholesterol [R = 0.59, p < 0.0001], triglycerides [R = 0.41, p < 0.001].

Conclusions: Our data showed that increased cachetin promotes the formation of T2DM in HBP along with hemodynamic parameters, AO, and IR. Cardio metabolic risk is increased in HBP on presence AO, pre-diabetes and T2DM as evidenced by the relationship between the basic and additional cardiac metabolic markers.

DIFFERENTIAL ASSOCIATION OF GLUCOSE METABOLIC INDICES WITH ARTERIAL STIFFNESS AND MICROALBUMINURIA IN HYPERTENSIVE PATIENTS WITH METABOLIC SYNDROME

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Objectives: Arterial stiffness and microalbuminuria are markers of target organ damage and carry significant cardiovascular risk. Disorders of glucose metabolism such as metabolic syndrome and diabetes mellitus II have been associated with both arterial stiffness and microalbuminuria but whether it glucose per se or other indices of glucose metabolism that have the most powerful effect on target organ damage is unknown. The aim of the present study is to investigate the independent relationship of blood glucose, glycated hemoglobin and insulin resistance with arterial stiffness and microalbuminuria in hypertensive patients with metabolic syndrome.

Design and method: We studied 324 never treated hypertensive patients with metabolic syndrome defined by Adult Treatment Panel III criteria. Arterial stiffness was assessed by measuring carotid femoral pulse wave velocity (PWV) using the Complior device. Microalbuminuria excretion was measured after 24 h urine collection and albumin to creatinine ratio (ACR) was estimated. All patients underwent full laboratory tests, including insulin measurement and estimation of HOMA index of insulin resistance, glycated hemoglobin (HbA1c) and high sensitive Carboxy reactive protein (hsCRP).

Results: In the whole population the mean values of PWV and ACR were 8.8 m/s and 36.8 mg/g, respectively. In univariate analysis, both PWV and ACR were significantly associated with all indices of glucose metabolism (p < 0.001) for the association of PWV and ACR with glucose, HbA1c and HOMA. When all indices of glucose were entered into the same model of multivariate analysis, after adjustment for age, gender, body mass index, smoking, mean arterial pressure and hsCRP PWV was independently related to HOMA (beta 0.06, p < 0.05) whereas ACR was independently related to HbA1c (beta 0.38, p < 0.001) and glucose levels (beta 0.34, p < 0.01).

Conclusions: Hypertensive patients with metabolic syndrome, among indices of glucose metabolism, insulin resistance is the most powerful determinant of arterial stiffness whereas glycated hemoglobin has the strongest association with microalbuminuria. The present findings suggest possible pathophysiological mechanisms underlying the relationship between abnormal glucose metabolism and target organ damage and emphasize the need for measurement of insulin levels and glycated hemoglobin in all patients with hypertension and metabolic syndrome in order to improve their risk stratification.

MARKERS OF INFLAMMATION AND LIPID PROFILE IN THE PATHOGENESIS OF VASCULAR WALL REMODELING IN HYPERTENSIVE PATIENTS WITH ABDOMINAL OBESITY

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Objectives: To study correlations between structural parameters of vessel wall, inflammation and lipid profile in mechanical model of mechanical parameters in patients with arterial hypertension (AH) and abdominal obesity (AO).

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