telmisartan (T) and lercanidipine (L) on BP and IR in hypertensive patients. Twenty patients (10 male and 10 female), with a mean age of 52.8 ± 8.7 (m±SD) years and mild-moderate hypertension were randomized to 80 mg T or 10 mg L daily. After two months of treatment, if BP was >140/90 mmHg the one drug was added to the other for two more months. BP was measured in the clinic every month. IR was measured at baseline, and 2 and 4 months of the study with Homeostasis Model Assessment (HOMA) method and an insulin sensitivity index (ISI) derived from an oral glucose tolerance test. Blood pressure (SBP/DBP) was significantly reduced in two months both in total (from 165.3 ± 10.4/102.7 ± 6.1 to 151.7 ± 8.0/96.1 ± 6.2 mmHg, p < 0.001 for SBP and DBP) and in the two drug groups (166.1 ± 7.9/103.0 ± 5.4 vs 152.0 ± 7.8/95.3 ± 4.2 mmHg, p < 0.001 for T and 164.5 ± 8.2/102.4 ± 2.1 vs 151.3 ± 8.5/96.5 ± 3.6, p < 0.001 for L). IR was slightly but not significantly reduced both in total (from 3.15 ± 1.41 to 2.61 ± 1.72, p = 0.23 with HOMA-IR and from 0.076 ± 0.037 to 0.091 ± 0.045, p = 0.28 with ISI) and in the two groups. Only two patients in every group had controlled BP at the end of 2 months. In the rest the second drug was added. At the end of 4 months BP was controlled in all patients (129.5 ± 7.2/81.9 ± 5.2 mmHg in total) and was significantly reduced (p < 0.001) versus baseline. IR was also significantly reduced versus baseline both in total (2.28 ± 1.35 with HOMA-IR and 0.103 ± 0.038 with ISI, p < 0.05) and in the two groups. There was no difference in BP or IR reduction between the two groups. In conclusion, the two drugs resulted in significant decrease in BP without difference between them on 2 months, while on 4 months BP was furthermore decreased. The effect of the two drugs in IR was favorable but not significant on 2 months but their combination resulted in significant reduction on IR on 4 months. It is possible that IR needed more time and better BP control to be improved with monotherapy.

Key Words: Insulin Resistance, Telmisartan, Lercanidipine

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ANTIPHOSPHOLIPID SYNDROME AND METABOLIC SYNDROME – MYTH OR PATHOGENETIC REALITY?
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Background: There is no clear concept concerning the role of immune disorders in pathogenesis of metabolic syndrome (MS). The aim of the study was to evaluate the levels of antiphospholipid antibodies depending on arterial hypertension (AH) stages and hypertension’s complications appearance in patients with verified MS.

Method: 55 patients with MS were involved into the study (30 men and 25 women, mean 48.4 ± 4.1 years old); the 1st group included 25 patients with MS and moderate AH; the 2nd group – 20 patients with severe AH (stage 3), complicated with cerebral ischemic insults and acute myocardial infarctions; control group included 10 patients with mild AH stage 1 (without target organs injury). For research purpose the antibodies to cardiolipine (AKL) isotypes IgG and IgM were typed with the standard immune enzyme method (ELISA), titres of antibodies to myocardial, renal, cerebral and vascular intimae antigens were investigated.

Results: In patients of the 1st group average systolic blood pressure (SBP) was 180.0 ± 10.3 Hg mm., diastolic blood pressure (DBP) was 105.0 ± 8.7 Hg mm., in the 2nd group – SBP was 205.0 ± 21.8 Hg mm., DBP – 110.5 ± 10.1 Hg mm.

Isotype of IgM-AKL antibodies’ increasing was in 5 patients of the 1st group. Isotypes of IgG-AKL and IgM-AKL antibodies increased in 5 and 4 patients of the 2nd group, accordingly. The titres of antibodies to myocardial, renal, cerebral and vascular intimae antigens were significantly higher in the patients of the 1st and 2nd groups comparatively to the control group (p < 0.05). Level of antibodies to target-organs antigens most closely correlated to the diastolic blood pressure in the 2nd group (the highest correlation indices to the all research target-organs). Smaller but still strong correlation coefficients of DBP to target-organs antigens antibodies were in 1st group. The power of correlative relations between antiphospholipid antibodies levels to target-organs antigens depends on arterial blood pressure level and AH’s complications appearance in patients with MS.

Conclusion: Antiphospholipid antibodies were found in 31% patients with MS. Either level of IgG-AKL and IgM-AKL or antitissue, antirenal, antmyocardial and anticerebral antibodies was respective to AH stage showing dependencies between target organs failure and immune disorders.

Key Words: Metabolic Syndrome, Arterial Hypertension, Antiphospholipid Syndrome

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ACE INHIBITION AMELIORATES CARDIAC STEATOSIS IN OBSESE ZUCKER RATS
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Cardiac steatosis, like hepatic and insular steatosis, is followed by a progressive increase in extracellular matrix expansion and fibrosis. Additionally, cardiac lipotoxicity has been reported in obese Zucker rats (OZR), which is a well-known animal model of metabolic syndrome X. Since renin angiotensin system is involved in the pathogenesis of the metabolic syndrome, the objective of the present study was to evaluate whether ACE inhibition by Ramipril (R) can ameliorate lipid deposit in cardiomyocytes of obese Zucker rats (OZR), beyond controlling blood pressure (BP). G1 OZR; G2 OZR+R; G3 OZR+Amlodipine (AML); and G4 lean Zucker rats (LZR) as control. G2 with R 1 mg/kg/day and G3 with AML 3 mg/kg/day for 6 months. Hearts were processed for light microscopy. In order to determine lipid deposit in cardiomyocytes (LDCM), Oil red was performed. We evaluated: a) systolic blood pressure (SBP) mmHg; b) insulin/glucose ratio (I/G ratio); c)serum triglycerides (TG) mmol/l; d) LDCM (% positive staining by Oil red /area); e) LDCM / TG ratio. At the end of the experiment: a) SBP= G1:153.5 ± 3.7; G2: 125.9 ± 2.5; G3: 124.1 ± 1.5; G4: 123.4 ± 1.7; b) I/G ratio= G1:60.1 ± 5.1**; G2: 44.7 ± 5.7; G3: 62.1 ± 6.4**; G4: 8.2 ± 2.4; c) TG= G1:11.2 ± 2.2**; G2: 7.3 ± 1.4; G3: 10.9 ± 1.8**; G4: 0.3 ± 0.1; d) LDCM= G1:124.2 ± 2.7**; G2: 0.8 ± 0.2; G3: 11.1 ± 2.1**; G4: 0.0 ± 0.0; e) LDCM / TG ratio= G1:1.12** ± 0.29; G2: 0.07 ± 0.03; G3: 1.03 ± 0.19**; G4: 0.0 ± 0. * vs. all groups p < 0.05; ** vs. G2 & G4 p < 0.05. Untreated OZR showed a significant LDCM along with remarkable disturbance in serum metabolic parameters. AML reduced significantly SBP, however it failed to modify both serum metabolic parameters and LDCM. By contrast, despite a modest although significant reduction in I/G ratio and serum TG, ACE inhibition by R, showed a substantial reduction in LDCM, beyond controlling SBP in this animal model.

Key Words: ACE Inhibition, Lipid Deposit, Myocardium

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ORLISTAT-INDUCED WEIGHT LOSS CONTRIBUTES TO MORE EFFECTIVE BLOOD PRESSURE CONTROL IN TREATED OBESE ESSENTIAL HYPERTENSIVE SUBJECTS
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In the present study, we aimed at determining whether orlistat administration, plus mild caloric restriction, can have beneficial effects on blood pressure (BP) levels, in obese patients with inadequately controlled essential hypertension.