E-POSTERS

P14 DIABETES

THE INFLUENCE OF LIRAGLUTIDE ON THE LEVEL OF BLOOD PRESSURE IN PATIENTS WITH ARTERIAL HYPERTENSION AGAINST THE BACKGROUND OF OBESITY AND TYPE 2 DIABETES MELLITUS

Larysa Zhuravlyova, Tetyana Rogachova, Nelya Sokolnikova, Maryna Filonenko. *Kharkiv National Medical University, Kharkiv, UKRAINE*

Objective: To assess the effect of liraglutide (L) on the level of blood pressure (BP) in patients with arterial hypertension (AH) and obesity against the background of type 2 diabetes mellitus (T2DM).

Design and method: A total of 55 patients with stage II AH and concomitant non-severe T2DM were examined (fasting plasma glucose <12 mmol/L, glycosylated hemoglobin (HbA1c) - 8.75 ± 1.4%, disease duration 6.4 ± 1.8 years, mean age 51.4 ± 2.7, BMI 35.2 ± 2.6 kg/m2, mean BP 165/103 ± 3.4/2.2 mm Hg). Patients were distributed into 2 groups: the comparison group consisted of 22 patients who received metformin 850 mg 2/day, lisinopril 10 mg 1/day and amlodipine 10 mg 1/day. Patients of the main group (L-group, n = 23), received liraglutide 1.8 mg in addition to similar therapy.

Results: 6 months after the initiation of therapy, the following results were obtained: HbA1C in the L group was 6.35 ± 0.5%, and in the comparison group - 7.78 ± 0.45% (p<0.05). BMI in the L-group was 30.28 ± 1.1 kg/m2, and in the comparison group - 32.5 ± 1.2 kg/m2. Systolic blood pressure (SBP) in the L-group was 132 ± 8.23 mm Hg., and in the comparison group - 143.5 ± 10.15 mm Hg., p<0.05 of difference between groups. The diastolic blood pressure (DBP) in the L- group was 84.5 ± 3.7 mm Hg, and in the comparison group - 89 ± 5.5 mm Hg, significant differences were not identified.

Conclusions: A significant decrease in SBP during treatment with liraglutide in patients with hypertension against the background of obesity and type 2 diabetes can be due to both significant loss of body weight and an improvement of metabolic control. The obtained data suggest that liraglutide has a potential to reduce cardiovascular risk in hypertensive patients with obesity and diabetes.

THE ASSOCIATION BETWEEN ARTERIAL STIFFNESS AND CIRCULATING ADIPOKINE IN PATIENTS WITH TYPE 2 DIABETES AND COMORBID OVERWEIGHT OR OBESITY

Sai Krishna Ragh Varahabhatla[1], Oleg Olegovich Soloviuk[2], Olena Soloviuk[3], Elena Nazarenko[2]. [1]*Zaporizhzhya State Medical University, Zaporizhzhya, UKRAINE,* [2]*Department of Internal diseases-1, Zaporizhzhya State Medical University, Zaporizhzhya, UKRAINE,* [3]*Zaporizhzhya medical academy of postgraduate education of Ministry of Health of Ukraine, Zaporizhzhya, UKRAINE*

Objective: Omentin-1 is a circulating adipokine with anti-inflammatory, anti-atherosclerotic, cardioprotective effects. It is hypothesised that reduced levels of omentin-1 is connected with increase in arterial stiffness, thus leading to the rise in acute vascular events. A strong relationship between arterial stiffness and the levels of circulating omentin-1 in patients with diabetes mellitus type 2 (DM-2) and comorbid overweight or obesity was adapted from literature which necessitated for this study.

Design and method: 98 patients with diabetes mellitus type 2 were examined, of which 64 patients (34 women and 30 men) with comorbid overweight or obesity (BMI more than 25), included in the 1st group, 34 patients with normal body weight (19 women and 1 5 men) were in the 2nd group at the Regional Hospital, Zaporizhzhia. As a control, 28 practically healthy individuals were examined, comparable with the 1st and 2nd groups by age and sex. The levels of circulating Omentin-1 was determined by enzyme-linked immunosorbent assay and arterial stiffness was assessed by the pulse wave velocity (PWV) of the elastic and muscular arteries during rheovasography.

Results: Results: In patients of the 1st group, the level of omentin-1 was 127.5% lower than in the 2nd group, with a longer duration of diabetes, the average values of omentin-1 were lower by 39.2% (p <0.05) in Group 1 and 25.9% (p <0.05) in group 2 compared with the control group. PWV in muscular arteries in the 2nd group was 15.7% higher than in the 2nd and 34.3% than in the control; Differences in elastic arteries were 10.6% and 30.5%, respectively. A relationship was established between the level of omentin-1, as well as PWV in the muscular (r = -0.56, p <0.05) and elastic arteries (r = -0.47, p <0.05).

Conclusions: In patients with DM-2 and comorbid overweight or obesity, a decrease in the level of omentin-1 was noted, which was associated with high arterial stiffness leading to an increased cardiovascular mortality risk. Thus, omentin-1 is a potential biomarker and a new combined therapeutic target for metabolic and vascular diseases.

ISOLATED SYSTOLIC HYPERTENSION AND COMBINED SYSTOLIC-DIASTOLIC HYPERTEN-SION FOR PREDICTION OF NEW-ONSET DIABETES MELLITUS - DATA FROM A 8-YEAR-FOLLOW-UP STUDY

K. Tsioufis, K. Dimitriadis, I. Liatakis, E. Koutra, I. Leontsinis, M Kouremeti, I. Iliakis, N. Karaminas, K. Thomopoulos, D. Tousoulis. *First Cardiology Clinic, Hippokration Hospital, Athens, GREECE*

Objective: Isolated systolic hypertension (ISH) and combined systolic-diastolic hypertension (CH) are related with increased cardiovascular risk, while new-onset diabetes mellitus (NOD) is linked with atherosclerosis progression. To compare the predictive role of ISH and CH for the incidence of NOD in a cohort of essential hypertensive patients.

Design and method: We followed up 1435 non-diabetic essential hypertensives with office systolic blood pressure (BP)> or = 140 mmHg [mean age 57 years, 730 males, office BP=153/92 mmHg] for a mean period of 8 years. All subjects had at least one annual visit and at baseline underwent echocardiographic study and blood sampling for estimation of metabolic profile. Patients with baseline ISH exhibited office systolic BP > or =140 mmHg and office diastolic BP <90 mmHg, while those with CH had office systolic BP > or = 140 mmHg and office diastolic BP> or =90 mmHg. Moreover, NOD was defined if at one or more of the follow-up visits a previously non-diabetic patient reported being on insulin or an oral hypoglycemic drug or if casual plasma glucose concentration > or = 200 mg/dl or fasting glucose concentration > or = 126 mg/dl or 2-h post load glucose > or = 200 mg/dl during an oral glucose tolerance test.

Results: The incidence of NOD over the follow-up period was 4.2% (n=60). Patients with ISH (n=460) compared to those with CH (n=975) were older (65±11 vs 54±10 years, p<0.0001), had at baseline lower waist circumference (94.5±11 vs 99±13 cm, p<0.0001), office systolic BP (149±12 vs 155±13 mmHg, p<0.0001), office diastolic BP (80±8 vs 98±6 mmHg, p<0.0001), while did not differ regarding left ventricular mass index, glucose and lipid levels (p=NS for all). Univariate Cox regression analysis revealed that baseline ISH (hazard ratio=2.143, p=0.016) and CH (hazard ratio=1.272, p=0.029) predicted NOD. However, in multivariate Cox regression model, CH did not turn out to be an independent predictor of NOD.

Conclusions: In essential hypertensive patients, ISH but not CH exhibits independent prognostic value for NOD. These findings support that ISH constitutes a hypertensive phenotype of increased metabolic risk needing careful evaluation and treatment.

YOUNG PATIENTS WITH TYPE 1 DIABETES MELLITUS WITHOUT CARDIOVASCULAR DISEASES ARE CHARACTERIZED BY HIGH FREQUENCY OF UNFAVOURABLE BLOOD PRESSURE PHENOTYPES

D. Medvedev, A. Safarova, E. Troitskaya, Y. Stavtseva, V. Efimova, Z. Kobalava. *Peoples` Friendship University of Russia (RUDN University), Moscow, RUSSIA*

Objective: Type 1 diabetes mellitus (T1DM) remains a disease with high risk of cardiovascular disease (CVD). Hypertension (HTN) may be underdiagnosed in this population. Data on ABPM profile in patients with T1DM are lacking. The aim of the study was to assess the prevalence of different BP phenotypes and dipping patterns in patients with T1DM without known CVD.

Design and method: Study group included 125 patients with T1DM aged 18-44 years: 60% males, 29.2±7.6 years, median DM duration 6.9 years). 24-hour ABPM of brachial BP was performed with BPLab Vasotens. BP levels and phe-

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