Al-Trawneh O.V.
The therapeutic strategy is a combination with arterial hypertension and type 2 diabetes mellitus
Kharkiv National Medical University, Kharkiv, Ukraine
Department of clinical pharmacology
Scientific supervisor: professor Bobronnikova L.R.

Introduction. Arterial hypertension (AH) is often comorbid with associated type 2 diabetes mellitus (T2DM). These patients belong to high cardiovascular risk group and classified by early onset and atherosclerosis progression and cardiovascular complication. In connection therewith, differential correction is an important and promising subject in a therapy of given group of patients.

Aim of the present research is to estimate the effectiveness of the combination therapy of patients with AH comorbid with associated T2DM.

Materials and methods. 42 AH patients of II stage and 2nd phase of T2DM were examined. The average age of the patients was $54,7 \pm 5,4$ years. The control group (n = 20) was comparable in age and sex. It was studied the carbohydrate metabolism, index HOMA-IR, disturbance in lipid metabolism, oxidative stress index levels of malondialdehyde (MDA) and superoxide dismutase (SOD). The body mass index (BMI) of the patients of group 1– 27,15; group 2 – 29,13.

To depend upon the type of treatment, the patients were divided into groups: the 1st is a group of patients (n = 23) got the basic antihypertensive therapy with ACE inhibitors and selective β - adrenoblocker; the 2nd group (n = 19) received additional lipoic acid treatment (Berlithion) in daily dosage to 600 mkg per day and rosuvastatin 10 mg once per day. The statistical analysis was performed by using Microsoft Excel program, Statistica for Windows.

Results. BMI hadn't veracious distinctions ($p>0,05$) influenced by therapy. The standard therapy for patients of the 1st group hasn't disclosed the material effect the lipid spectrum index of blood serum: low-density lipoprotein cholesterol level falling far short of the target values ($4,79\pm0,34$ mmol/l), while the index for patients of the 2nd group was $3,29\pm0,25$ mmol/l, the total cholesterol of blood serum – accordingly was $6,7\pm0,16$ mmol/l and $5,5\pm0,28$ mmol/l (control - $4,74\pm0,15$ mmol/l), triglyceride $1,29\pm0,64$ mmol/l and $1,26\pm0,87$ mmol/l, (control - $1,25\pm0.52$ mmol/l) ($p<0,05$), lipoproteins of high $1,28\pm0,5$ mmol/l and $1,38\pm0,32$ mmol/l. MDA level of blood serum for 2nd group and control was lower as ($p<0,001$), but SOD activity of blood serum was lower in comparison with control ($p<0,001$). HOMA-IR index for patients of the 2nd group accordingly was $4,46\pm0,3$ и $3,45\pm0,5$, ($p<0,05$).

Conclusions. Prescription of lipoic acid medicine and rosuvastatin in daily dosage to 10 mg per day improved the carbohydrate and lipid metabolism indexes, as well as indicators of antioxidant stress, which can significantly reduce the risk of cardiovascular complications in these patients.