THE EFFICACY OF COMBITATION OF EMPAGLIFLOZIN AND METFORMIN IN PATIENTS WITH ARTERIAL HYPERTENSION AND TYPE 2 DIABETES MELLITUS

L. Zhuravlyova, M. Filonenko, T. Rogachova, N. Sokolnikova
Department of Internal Medicine N3 and Endocrinology of
Kharkiv National Medical University, Kharkiv, Ukraine
prof.zhuravlyova@gmail.com, http://vnmed3.kharkiv.ua

Purpose. To determine the efficacy of combination of empagliflozin and metformin in patients with arterial hypertension (AH) and type 2 diabetes mellitus (T2DM).

Methods. A total of 52 patients with AH, stage II; obesity, stage I and concomitant T2DM were examined (28 women and 24 men, mean age 58.4 ± 2.9, fasting plasma glucose < 9 mmol/L, glycosylated hemoglobin (HbA1c) - 7.54 ± 1.2%, , mean blood pressure (BP) 167/104 ± 15.5/3.6 mm Hg, BMI 32.2 ± 2.1 kg/m2, disease duration 5.4 ± 1.6 years,). Two groups of patients were formed: the comparison group included 25 patients who received metformin 1000 mg 2/day, amlodipine 10 mg 1/day and lisinopril 10 mg 1/day. Patients of the main group (n = 27) received empagliflozin 10 mg in addition to standard therapy. The follow-up period lasted 6 months.

Results. The following results were obtained by the end of the study period: HbA1C in the main group was 6.23±0.7%, while in the comparison group – 6.58±0.5% ($p < 0.05$). 46.6% of patients in the main group had achieved the target HgA1c<7.0% compared to 24.5% in the control group ($p<0.01$). There was no significant increase in the frequency and severity of hypoglycemic episodes. The patients of the main group were characterized by greater weight loss (3.4±0.4 kg) than those of comparison group (0.9±0.3 kg), $p<0.01$. The mean systolic BP in the main group was 133 ± 6.12 mm Hg., while in the comparison group - 147.2 ± 8.13 mm Hg., $p < 0.05$. The diastolic blood pressure (DBP) was 84.6 ± 3.7 mm Hg and 89,8 ± 5.1 mm Hg, respectively.

Conclusions. The obtained data suggest that inclusion of empagliflozin into a standard therapy of hypertension and type 2 diabetes provides multiple benefits, namely: improves glycemic control, ensures better regulation of blood pressure and promotes weight loss.