Therefore, polarized light produces a protective action on the animals with experimental flu infection. In the group of animals infected with a therapeutic (sub-lethal) dose of flu A virus and exposed to the effect of polarized light 80% of animals survived (remained alive on the 15th day after infection). Therefore, polarized polychromatic light can be considered to be an effective therapeutic means in mice infected with influenza virus. It is important that it major protective action is mostly stipulated by the correction of proteinase inhibitor system.

Survival rate in the control 6 th group of animals (without PILER-light use) was 50%, and in the 7th group after PILER-light effect – 80%. That is, the reproduction of flu A virus in the body of mice became slow.

Therefore, survival of mice infected with a lethal dose of influenza A virus under PILER-light effect is likely to be the result of an increased content of inhibitor in the lungs compared with that of proteinase activity. This mechanism can be suggested to work in case of diseases caused by other respiratory viruses.

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ASSOCIATION OF GNB3 GENE POLYMORPHISM (rs5443) WITH INDICATORS OF LEFT VENTRICULAR HYPERTROPHY IN PATIENTS WITH ARTERIAL HYPERTENSION CONSIDERING GENDER

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Left ventricular hypertrophy (LVH) is an unfavorable prognostic marker for the development of fatal cardiovascular events, including patients with arterial hypertension (AH). LVH and the geometric structure of the heart are assessed by Left Ventricular Myocardial Mass (LVMM), Left-Ventricular Myocardial Mass Index (LVMMI) and Relative Wall Thickness of Left Ventricle (LV RWT).

The aim of the study was to analyze the relationship of polymorphic variants of the guanine nucleotide binding protein (G-protein) *β3* subunit gene (*GNβ3*) C825T polymorphism (GNβ3, 825C>T; dbSNP: rs5443) with the indicators of LVMM, LVMMI, LV RWT in patients with primary (essential) hypertension (EH).

A cross-sectional study had been involved 72 patients with EH stage II, 1-3 degrees of blood pressure, high and very high cardiovascular risk. There were 29,16% (21) men, 70,84% (51) women among patients. The average age of patients was 59,87 ± 7,98 years. The control group consisted of 48 healthy individuals, comparable in age (49,13 ± 6,28 years) and sex distribution (62,5% – women, 37,5% – men). *GNβ3* C825T polymorphism had investigated by PRL in real time. To establish LVH, all patients had been undergone echocardiography. LVH was calculated by LVMM (according to the Penn Convention) and LVMMI, geometric models – by LV RWT and LVMMI. To evaluate LVH, LVMMI were taken ≥115 g/m^2 in men, ≥95 g/m^2 in women (ESC, ESH 2018).

We have found that men carrying the CC genotype of the *GNβ3* gene LVMM was 297,87 ± 24,54 g, LVMMI – 139,01 ± 17,06 g/m^2, LV RWT – 0,47 ± 0,03 u; in women – 284,74 ± 20,04 g/m^2, 143,29 ± 9,22 g/m^2 and 0,44 ± 0,03 u, respectively. In male patients, TC genotype carriers, we have found that LVMM was 308,68 ± 33,70 g (p_{CC}>0,05), LVMMI – 142,75 ± 15,38 g/m^2 (p_{CC}>0,05), LV RWT – 0,45 ± 0,02 u (p_{CC}>0,05); in women carrying the TC genotype – 303,68 ± 15,77 g (p_{CC}>0,05), 156,98 ± 12,42 g/m^2 (p_{CC}>0,05) and 0,45 ± 0,03 u (p_{CC}>0,05), respectively. In patients with EH, carriers of the TT genotype of the *GNβ3* gene, we have estimated that: in men LVMM was 391,47 ± 31,62 g ($p_{CC,TC}$<0,05), LVMMI – 179,82 ± 10,60 g/m^2 ($p_{CC,TC}$<0,05), LV RWT – 0,45 ± 0,01 u ($p_{CC,TC}$>0,05); in women with TT genotype LVMM 338,25 ± 16,09 g ($p_{CC,TC}$<0,05); LVMMI – 165,41 ± 10,86 g/m^2 (p_{CC}<0,05), LV RWT – 0,45 ± 0,03 u.

Thus, the *GNβ3* gene (rs5443) is associated with greater LVH in patients with EH carriers of the TT genotype, especially in men, with LVMMI – by 29,36% and 25,97% ($p_{CC,TC}$<0,05), slightly less in women – by 15,44% (p_{CC}<0,05) and 5,37% (p_{TC}>0,05), respectively.