

Additional opportunities for antihypertensive therapy improvement in young patients with arterial hypertension and concomitant obesity

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The high prevalence of arterial hypertension (AH) and concomitant obesity in young patients is not only a medical but also a social problem. It is important to develop additional modern approaches to the management of young patients with AH and obesity, which will increase the effectiveness of existing antihypertensive (anti-AH) medical therapy and prevent early damage of target organs and complications.

The purpose of the research was to evaluate the antihypertensive efficacy of the proposed complex treatment and its impact on quality of life in young patients with AH and obesity (or overweight).

Material and methods: 123 patients with AH (ESC 2018), of young age 18–44 (mean age 32.81 ± 0.58) y.o. were examined, among them the overweight was in 40 patients, obesity - in 42 patients. The average BMI was (28.34 ± 0.45) kg/m². All patients were divided into 2 groups depending on the treatment: Group 1 – standard anti-AH treatment, Group 2 – modified combined therapy, which included on the background of standard anti-AH medications the dosed controlled physical exercises with its obligatory registration, a modified DASH diet with increased intake of Ca-containing products and Metformin in the presence of insulin resistance according to the HOMA index (with correction of dose depending on BMI). In dynamics the patients were performed daily blood pressure monitoring (BPM) was performed and the SF-36 questionnaire was used to assess the quality of life (QOL).

Results and discussion: According to BPM data in the Group 1 the average 24-hour value of SBP decreased by 12.5% ($p=0.01$), in Group 2 – by 20.2% ($p=0.001$), DBP - by 11.2% ($p=0.03$) and by 18.8% ($p=0.01$) respectively (the difference between the groups for SBP and DBP was $p=0.032$ and $p=0.041$, respectively). Assessing the degree of nocturnal blood pressure decreasing, in the Group 1 the percentage of patients with insufficient nocturnal blood pressure decreasing (non-dipper) and stable increasing (night peaker) decreased non-significantly ($p=0.086$), unlike the Group 2, where there was a significant ($p=0.02$) positive dynamics in relation to these unfavorable types of blood pressure profile. Evaluating the indicators of QOL according to SF-36, the physical component of health in the Group 1 increased by 16.7%, in Group 2 – by 33.4% ($p=0.001$), the mental component of health – by 13.5% and 28.9%, respectively ($p=0.001$).

Thus, the additional use of the proposed treatment complex with the inclusion of dosed registered exercises, increased consumption of Ca-containing products and correction of insulinresistance significantly increases the effectiveness of antihypertensive medical therapy and has a positive effect on physical and mental components of QOL in young patients with AH and obesity or overweight.