

### **XVIII. Streszczenie w języku angielskim.**

Hypertension (HT) is the most common chronic disease in both developing and highly developed countries. In Poland, HT affects about 30% of the adult population. Morbidity of primary HT directly correlates with the level of development of civilization, which apart from obvious and unquestioned benefits, carries the burden of stress stimuli. In addition to physical factors that cause stress, such as extremely low or high ambient temperature, high intensity physical exertion or hunger, we also deal with mental stress. According to current knowledge, HT along with obesity, hypercholesterolemia, diabetes and smoking is one of the most important risk factors for the development of cardiovascular diseases. The obesity epidemic, ubiquitous stressors, unhealthy lifestyles lead to the development of HT in younger and younger people. Unfortunately, despite the use of non-pharmacological treatment and often multidirectional pharmacotherapy, a certain group of patients still fails to achieve desirable BP (Blood Pressure) targets. The aim of the study was to analyze the impact of stress and psychogenic factors on the occurrence of high blood pressure values and analysis of alternative treatments of hypertension.

Material and methods: the cross-sectional study included 200 patients (median age  $Me = 60.1 \pm 15.1$  years; 59.5% were women; the median history of HT was 13.1 years), under care of the Hypertension Outpatient Unit or hospitalized in 2nd Department of Nephrology with Hypertension and Dialysis Unit, University Clinical Hospital in Białystok. The inclusion criteria for were the diagnosis of HT, familiarization with the purpose of the study and its scope, as well as the signing of informed consent by the patient. Three research tools were used to conduct the study: the standardized WHOQOL questionnaire assessing the quality of life, the standardized Mini-COPE inventory for measuring dealing with stress and own author's survey, which task was to characterize the group.

Results: 97.5% of the study group were pharmacologically treated. A little over a half of patients with HT (52.0%) had a good BP control. Most of the respondents showed the presence of one or more modifiable risk factors predisposing to the development of HT, including  $BMI \geq 30 \text{ kg} / \text{m}^2$  (48.0%) and the higher BP was connected with higher BMI. As many as 65.0% of respondents had a person in a family suffering from HT. 79.5% of all studied group showed knowledge of the HT prevention and treatment, unfortunately only 26.0% declared its use, while the lack of sufficient physical activity was found in up to 82.5% of patients. Analyzing the impact of stress on the development and course of HT, it was found

that in the opinion of as many as 77.5% of studied population, a sudden increase in BP was directly related to the emotional factor, occurring both spontaneously and chronically.

The results of the Mini-Cope survey assessing the degree of dealing with stress showed good coping with the emotional factor in more than 2/3 of respondents, the remaining persons were included to the group of people dealing with stress on average level. In the assessing of quality of life by WHOQOL-BREF standardized survey, the following results were obtained: in the areas of quality of life, own environment and mental health, we recorded that the quality of life was at a very high level. On the other hand, extremely low values were found in the social sphere. It suggests that the respondents did not receive adequate support from family and close friends. They also assessed their intimate life poorly and felt bad and lonely in the surrounding society.

In conclusion, according to the study results, it can be said that the exposure to the emotional factor has a key impact on the BP values obtained. The analysis also showed a surprisingly low effectiveness of the initial treatment of HT with antihypertensive drugs, which forced the respondents repeatedly to change the treatment regimens as well as to increase the dosage of used medications. Although the desired therapeutic effect was achieved, in the meantime the side effects of the drugs also increased. In the group of people included in the study, who used a combination of antihypertensive agents with antidepressants or anxiolytics, immediate improvement of BP control was obtained from the first application. This fact undoubtedly clinically supports the stressful etiology of HT.

