

### Список використаних джерел:

1. Арефьев В. Г. Здоров'я підлітків і рухова активність. *Вісник Чернігівського національного педагогічного університету. Сер. Педагогічні науки. Фізичне виховання та спорт*. 2014;(3):6–10.
2. Веретельникова Ю. А. Рухова активність і здоров'я різних верств населення. Харків : ХНМУ, 2016;25–30.
3. Гончарова Н. М. Соціально-педагогічні передумови розробки концепції здоров'яформуючих технологій у процесі фізичного виховання школярів. 2018;(2):61–6.
4. Перегінєць М. М. Організація процесу фізичного виховання старшокласників в закладах освіти різного типу : дис. канд. наук з фіз. вих. і спорту : 24.00.02 / Перегінєць ММ. Київ, 2019. 243 с.
5. Перегінєць М. М, Долженко Л. П, Тронь Р. А. Рухова активність старшокласників Прикарпаття, які навчаються в загальноосвітніх закладах різного профілю. *Науковий часопис Нац. пед. ун-ту ім. М. П. Драгоманова*. Серія 15: 2017;(5/87):85–93.
6. Puszczalowska-Lizis E, Kułaga M. Zachowania zdrowotne uczniów szkół ponadgimnazjalnych w kontekście ich aktywności fizycznej. *Problemy higieny i epidemiologii*. 2016;(97):50–5.
7. Thorburn M, Stolz S. Embodied learning and school-based physical culture: implications for professionalism and practice in physical education. *Sport, education and society*. 2017;(6):721–31.

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**Sisetskiy A. P.,**

*Candidate of Medical Sciences,*

*Assistant Professor at the Department of Internal Medicine № 3*

*Bogomolets National Medical University*

*Kyiv, Ukraine*

### **REHABILITATION OF CORONARY ARTERY DISEASE, ARTERIAL HYPERTENSION AND ANXIETY-DEPRESSIVE DISORDERS DURING WARTIME**

Basic stabilization in coronary artery disease and arterial hypertension with characteristic of these diseases high level of psychoemotional exertion is significantly complicated by the addition of anxiety-depressive (somatoform) disorders, which worsens rehabilitation and requires additional correction, in particular pharmacological [1, 2, 3, 4]. For effective

rehabilitation of patients with such pathology and minimization of side effects of therapeutic schemes psychological and physical rehabilitation methods are necessary.

Psychological rehabilitation consists in the personal restructuring of the patient thanks to *image-associative correction* – graphic and kinesthetic reflection of unconscious psychotraumatic images with their replacement by adequate positive ones with the aim of achieving psychological stability (5). A new psychosomatic method has been developed – *holographic modeling*: spatial unfolding of the internal state hologram created from its integrative image and its subsequent reflection in external objects with positive feedback [6].

A new method of physical rehabilitation has also been developed – *landscape imaginative kinesiotherapy*: plastic reflection of integrative images of one's own psychoemotional states with fixation of positive ones in movements in priority natural conditions [5].

30 patients (men aged  $41.8 \pm 1.3$  years) with stable exertional angina pectoris II-III FC, stage II hypertension and somatoform disorders receiving standard treatment ( $\beta$ -blockers, calcium channel blockers, nitropreparations, tranquilizers), holographic modeling and landscape image kinesiotherapy were performed for 14 days. Cardiohemodynamics, ischemic activity and psychoemotional exertion, as well as the functional activity of erythrocytes and hemoglobin (Hb): hydroxy-, deoxy-, methemoglobin (MetHb), fractions of Hb – HbAo, HbA1, HbF were studied.

24-hour monitoring of ECG and arterial blood pressure, coronary ventriculography, bicycle test, echocardiography, disk electrophoresis in polyacrylamide gel, specially developed "Test Selfidentification System" and "Self-assessment of the Level of Psychoemotional Exertion" [7] were used for verification.

After the rehabilitation course in patients was noted an improvement in cardio-hemodynamics: the minute volume of blood circulation, heart and stroke indices increased ( $P < 0.05$ ). Systolic blood pressure decreased from  $171 \pm 1$  to  $129 \pm 1$  mm Hg. ( $P < .0.05$ ), diastolic blood pressure – from  $104 \pm 1$  to  $81 \pm 1$  mm Hg. ( $P < .0.05$ ). The frequency and duration of ischemic episodes decreased in 84% of patients. The fractional and ligand composition of Hb also improved: the content of MetHb and HbA1 significantly decreased, the level of HbA0 increased ( $P < .0.05$ ). The number of erythrocytes with high resistance has increased.

Psychoemotional exertion indices at the beginning of rehabilitation were: anxiety – 8.69, aggressiveness – 4.57, fear of death – 8.11, feeling of loneliness – 8.44, suicidality – 4.29. After rehabilitation: anxiety – 3.44, aggressiveness – 2.28, fear of death – 3.41, feeling of loneliness – 4.19, suicidality – 2.11. Before the start of rehabilitation, 88% of patients

assessed their condition as bad, 12% – very bad. After rehabilitation, 33% of patients noted a satisfactory condition, 61% – good and 6% – excellent. In 67% of patients the doses of  $\beta$ -adrenergic blockers and calcium channel blockers were significantly reduced while maintaining stable cardiohemodynamic parameters. Tranquilizers were discontinued in 57% of patients.

Effective rehabilitation of patients with stable exertional angina pectoris II–III FC, stage II hypertension and somatoform disorders in wartime is provided by methods of physical and psychological rehabilitation – holographic modeling and landscape image kinesiotherapy, which improve the psychoemotional state, cardiohemodynamics, hemoglobin and erythrocytes functional activity with a reducing in intensity of pharmacological correction.

### **Bibliography:**

1. Vaccarino V., Badimon L., Bremner J. D., et al; ESC Scientific Document Group Reviewers. Depression and coronary heart disease: 2018 position paper of the ESC working group on coronary pathophysiology and microcirculation. *Eur Heart J.* 2020;41(17):1687–1696. doi:10.1093/eurheartj/ehy913

2. Carney R. M., Freedland K. E. Depression and coronary heart disease. *Nat Rev Cardiol.* 2017;14(3): 145–155. doi:10.1038/nrcardio.2016.181

3. Kariuki-Nyuthe C., Stein D. J. Anxiety and related disorders and physical illness. In: Sartorius N, Holt RIG, Maj M, eds. Comorbidity of Mental and Physical Illness: A Selective Review. Karger; 2015:81–87.

4. Andriy P. Sisetskiy. CAD patients with hypertension and somatoform disorders rehabilitation strategies. *Wiadomości Lekarskie.* V. LXXIV, ISS. 3. P. 2. March 2021. S. 805.

5. Сисецкий А. П. «Відновлення. Образ+». International BMS. OmniScriptum PG.Beau Bassin. 2017. 120 с. ISBN 978-3-659-93397-4

6. Sisetskiy A. P. Holographic modeling in coronary artery disease, hypertension and anxiety-depressive disorders. «Медичні та фармацевтичні науки: Аналіз сучасності та прогноз майбутнього» 13–14.11.2020 : збірник матеріалів міжнародної науково-практичної конференції. Дніпро, 2020. С. 67–71.

7. Сісецький А. П. Визначення та корегування психоемоційної напруги при ІХС, гіпертонічній хворобі та соматоформних розладах. Міжнародна науково-практична конференція «Медична наука та практика в умовах сучасних трансформаційних процесів» 23–24.04.2021 : збірник тез наукових робіт. Львів, 2021. С. 40–47.