

at the same time. The affection of the envelope branch of LCA by atherosclerosis takes place more rarely.

According to the revealed dependence of the intima thickness index and the presence of the coronary vessels occlusion the definition of the threshold index of intima brachiocephalic vessels and the calculation of the diagnosis test specificity and sensitivity with different intima thickness levels were carried out.

High specificity (0,9) with high test sensitivity (0,96) was observed with the intima thickness threshold level that equaled 1,3. False diagnosis was recorded only in one case (1,3%).

Thus, while the intima thickness level equals 1,3 the probability of the coronary arteries occlusion presence is 98,7%.

The research showed high correlation relation between atherosclerotic plaques in carotids and coronary atherosclerosis. Moreover, the coronary arteries occlusion degree increases along with the increase in the intima thickness levels.

Thus, the method of the brachiocephalic vessels research via controlling of the intima thickness index allows us to define the degree of the coronary vessels affection by atherosclerosis within the patients with IHD and to carry out the atherosclerosis treatment by the medicines of various pharmacological groups effectiveness control. This method allows us to choose tactics for the patients with IHD treatment between conservative method and surgical interference.

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**SOME INDEXES OF VEGETATIVE NERVOUS SYSTEM AND ADAPTIVE ABILITIES OF HIGH-QUALIFICATION TAE-KWON-DO FIGHTERS**

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The research was carried out for the grant № 10-06-38656a/IO, that has been supported by Russian Human Science Fund. Nowadays the increase in volume and intensity of physical strain that often require the maximum mobilization of the athlete's organism systems is typical for the sport of highest achievements. Quite scanty comprehension model of sports physiology and the impact of tae-kwon-do (has an Olympic status since 2000) upon the organism's functional condition and the regulatory system's activity provides for the reason of the inadaptive changes development.

The point of this research is to study some of the vegetative nervous system indexes and the evaluation of adaptive abilities of the professional tae-kwon-do fighter's organisms.

34 male sportsmen within the age of 17-21 years were under observation, their sports qualifications were sports master and international class sports master.

The study of functional condition of regulatory organisms systems, the departments of vegetative nervous system in particular, was carried out by the method of variation pulsometer. The ECG registration was accomplished with the electrocardiograph «Polispectre – 8E», by the company «Neurosoft», in lying position and in the condition of active orthostatic probe (G. Makarova, 2002). The following indications were analysed: mode

**Table**

The indications of vegetative status of the tae-kwon-do-fighters of high qualification (according to R. Baevskiy)

Studied indications	Vegetative status of sportsmen	
	With the vagotony predomination <i>n</i> = 30	With the normotony predomination <i>n</i> = 4
	<i>M</i> ± <i>m</i>	<i>M</i> ± <i>m</i>
Mo, s	1,2 ± 0,15	0,71 ± 18,9
AMo, %	21,8 ± 4,77	41,4 ± 9,22
VS, s	0,59 ± 0,11	0,39 ± 0,07
SI, units	16,7 ± 7,7	84,6 ± 5,88

(Mo); mode amplitude (AMo); variation swing (VS); strain index (SI). The conception of two-contour heart rhythm regulation R.Baevskyi was used as basis. Thus Mo and AMo indications reflect the condition of sympathetic and parasympathetic departments of vegetative nervous system, Mo characterize humoral channel of heart rhythm regulation, and SI characterize the condition of central regulation contour and reflects the entrance of resolving information that is the result of other organism's physiological systems activity result, into the sinus node system.

While recording the vegetative status in calm according to the indication of the sympathetic and parasympathetic departments on the heart contraction rhythm, the sportsmen were divided into three groups. As the obtained data (see table) shows, the parasympathetic department of vegetative nervous system activity is predominance is typical for the 88,2% of studied sportsmen. The number of those with normotonia is 11,8%.

Vegetative reactivity was defined by the implementation of active orthostatic probe (5 minutes), that revealed the following types: with nor-

motonic vegetative activity – 63,3% of the sportsmen, with sympathetic-tonic – 15,2%, and with the predominance of asympathetic-tonic type of vegetative reactivity – 21,2%.

Thus, the increase in sympathetic influence within the vegetative balance strengthening was registered, while the increase of the adrenergic mechanisms activity in response of the body position change with asympathetic-tonic vegetative reactivity does not respond with the increase in nervous centres activation. In this case, as a rule, the changeover from short-term adaptive effect to long-term adaptation is absent. So we can suppose that this type of vegetative reactivity points at the overstrain condition, for which the lack of adaptive mechanisms and their inability to provide optimum adequate reaction of sportsman to the physical strain impact, is typical.

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