

STUDY OF MUSCLE-SKELETON SYSTEM DISORDER IN YOUNG SPORTSMEN IN VARIOUS SPORTS ACTIVITIES

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Introduction

General activity of the sportsmen at the modern stage of society development promotes in national prestige growth. Efficiency of years long sports training process depend on the health state of a sportsman [1,6,7,11]. Tough competition and extreme physical activity as well as chronic lack of recovery lead to the problem of early injury production of the sportsman's muscle-skeleton system [3].

The normal functioning of the organs and systems is an integral condition of good development of the entire body. There is a close relation between the muscle-skeleton system state (MSS) and health [5, 9, 10].

Tendency to growth in number of MSS diseases is considered worldwide and possesses the third place after the circulatory diseases, and in the structure of primary disablement - the second place. The sportsmen with the MSS disease, according to V.F. Bashkirov, are 44.05% [15].

The young sportsmen in the age of 17 have certain health disorders, and according to Y.V. Orlovskaya more than 70% stop doing their sports prematurely.

Purpose of the study: analyze and systematize scientific and methodological knowledge of domestic and foreign researchers about the MSS state of young sportsmen.

Materials and methods

Analysis and generalization of scientific and methodological literature.

Obtained results

Leading place as to the structure of pathologic prevalence belongs to the diseases of musculoskeletal system (29.98%) according to I. O. Kalynchenko, O.O Skyba [4] and in result of analysis of the pathologic prevalence index, depending on the specific character of the sports type, these specialists have determined that among children being engaged in combat sports, it is noted that probably the highest part of person (35,53 %) with disease of muscle-skeleton system (MSS), in comparison with other sport types ($p < 0,01$).

S.P. Myronov states that among the young sportsmen being engaged in various types of sports the frequency of MSS disorder detection in the form of spinal and pelvic bones position change, and the same with the functional blocking in different joints, pathologic changes in tonus of separate muscle groups, is in many times higher than among their equals in age, which are not connected with active types of sports. Herewith, the researcher says that regardless of the type of sports the increased stress on the reactivity of paravertebral muscles, which, during mechanical irritation of the interspinal ligaments, is displayed in appearance of the vertical muscle defense, which may be one of the signs of early degenerative changes in various structures of the spine [13].

The sportsmen of high qualification, who specialize in running for average distances, high jumps, canoeing, basketball, the analysis of the detection frequency MSS disorder is performed by E.I. Mints, have shown that a reduction volume of thoracic hyperkyphosis and

lumbar lordosis is observed in the representatives of some sports specializations, which are accompanied in a number of cases with insufficient disorder of its position in the frontal plane [12]. It is also established that the sportsmen of high qualification have a high rate of MSS functional disorders detection, in particular, restriction of mobility in various parts of the spine and functional disorders in the certain muscles and muscle groups. The leading role in terms of occurrence of MSS functional state disorders in highly qualified sportsmen are occupied by the exogenous factors - the specificity of training exercises as well as pedagogical mistakes made by the coaches during the classes aimed at training athletes [12].

According to O.O. Lahoda [8], it is necessary to pay a separate attention to a congenital asymmetry of lower extremity length as one of the endogenous reasons of MSS pathologic states in the young sportsmen, as this asymmetry is often used to improve the sports achievements. Healthy people have their left leg longer than the right one in average to 0.8 cm, and detection rate among the young sportsmen with true leg length asymmetry more than 10 mm is very high – 33.25 % [8].

According to Batti Molla Deyo, in the children and youth football there is rather high frequency of the MSS functional state disorder detection, which is a base for its specific injuries: shortening of one of the lower extremities, longitudinal flatfoot, spine position change in the sagittal and frontal planes, disorder of spatial location of pelvic bones, functional blocking in various areas of the spine, stable hypertonia of triceps muscle of calf and quadriceps muscle of thigh.

Conclusion

The performed analysis of the literature sources has demonstrated that many specialists studied the sportsmen's health state and there is a great number of theoretic and empirical knowledge, however it needs a depth study. The knowledge of mechanisms of muscle-skeleton system disorder will allow to slow down, stop and limit a negative impact. The perspective of further studies is in formation of means and methods required for influence upon the factors under study aiming to optimize the training process of the young sportsmen. The basis for reliability and sustainability in terms of sports competitions is a health of young sportsmen.

Literature

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