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Changes of chosen blood parameters in football players in relation to applied training loads during competition

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Researches were conducted on 20 football players of the I league. Athletes won the Polish Cup Finals and partook in the UEFA Cup play-offs during the research period. Respective anthropometric features were as follows: age 24.4 ± 3.65 years; body height 182.3 ± 5.22 cm; body mass 79.5 ± 6.46 kg. Examinations were performed thrice: at the beginning (beginning of March), in the middle (end of April) and at the end (middle of June) of the playing period. Examinations concerned levels of the chosen biochemical parameters of blood in the three micro cycles of training. Blood samples for (RBC), (Hgb), (HCT), 9ALAT) and (AspAT) were taken in the middle (Wednesday) of the each micro cycle. Samples for (CK) and (LDH) were taken each day from Monday to Friday. The restitution time from the match end and the first blood sample taking (for CK and LDH) amounted to 36 h in each series. Levels of RBC, Hgb, HTC and WBC were marked according to the standard methods with the Corning Company apparatus. Determinations of CK, LDH, ALAT, AspAT were made with the spectrophotometer type EPOLL-200 and POINTE-SCIENTIFIC reagents in the temperature of 37C for CK (physiological norm up to 166 IU/I) and 30C for LDH (physiological norm 50-166 IU/I). Physiological norm for ALAT amounted to 38 IU/I and 40 IU/I for AspAT. The training loads were recorded in every discussed micro cycle. Results were elaborated with the Statistica V. 5.0 software. Obtained results prove the changeability of the blood biochemical parameters especially those determining the after effort fatigue during the practice micro cycle. For example, the CK activity after the 36 h restitution of athlete i.e. on Monday examinations was high (697.4 U/L). It is the three times as large as the physiological norm (third examination series). However, taking into consideration the whole week micro cycle the gradual decrease of its level was noticed reaching 241.7 U/I on Friday. It was the effect of the proper choice of training loads during the cycle.

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