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Title: The damage of skeletal muscles due to A (H1N1v) virus

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Body: Introduction. The feature of the A (H1N1v) virus infection is the development of rhabdomyolysis of skeletal muscles, accompanied by increased levels of creatine kinase (CK), lactate dehydrogenase (LDH) and myoglobin of blood. [Carrillo-Esper R. Gac. Med. Mex. 2009; 45: 519-521]. Rhabdomyolysis leads to aggravation of respiratory failure (RF) and hypoxemia. Aims and objectives. The aim of the study was to investigate the level of skeletal muscle damage markers in A (H1N1v) virus infection. Methods. 135 patients with pneumonia associated with influenza A (H1N1v) were examined in Chita in season 2009-2010. Of them 58 (group I) were hospitalized to the ICU. Group II included 77 patients in the pulmonological department. 20 patients died. The virus was verified by the PCR. Immunohistochemistry (IHC) study was performed using paraffin sections of kidney parenchyma by biotin-streptavidin immunoperoxidase method with anti-human myoglobin after the autopsy. Results. In Group I patients the increased CK levels were found in 68.9% of cases, LDH - in 79.3% of cases. In Group II CK and LDH levels were increased in 2.59% and 3.89% of patients, respectively. CK and LDH levels in the blood of patients died of influenza A (H1N1v) were 1088 U\L [780; 1550] and 895 [800; 1457], in survivors - 87 [62; 189] and 285 [235; 400 respectively. The presence of myoglobin in the lumen of kidney tubules by IHC was revealed in 18 fatal cases (90%). Conclusion. The increased level of CK and LDH in blood are the prognostic markers of the severity and mortality due to influenza A (H1N1v), associated with the presence of myoglobin in the kidney tubules.