

REVEALING OF ADENOSINE TRIPHOSPHORIC ACID ANTIVIRAL PROPERTIES

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The adenosine triphosphoric acid (ATA) is known as a drug stimulating metabolic processes in organism and it is used to treat cardiovascular diseases. For the first time we revealed ATA antiviral effect in rabies and West-Nile infection models. The survival of experimental animals, infected with 10 LD₅₀ fixed rabies virus, increased by 50,0-75,2% as compared to controls. The drugs demonstrated its protective effect when used during 3-4 days period in the doses indicated above. This protective effect was revealed even with lower doses (2-5 LD₅₀ - when given once in 24 hours after infecting animals. Virologic examination of white mice brains, infected with 10 LD₅₀ fixed rabies virus, and treated with ATA in dose 1,4 mg/kg daily during 4 days, showed the reduction of virus titer by 2,25 lg LD₅₀/0,03 ml as compared to controls. ATA demonstrated activity against experimental encephalitis induced by West-Nile virus in white mice (the protective effect was 62,5% and even higher).

PROTECTIVE EFFECT OF AMINOGLYCOSIDE GROUP ANTIBIOTICS IN EXPERIMENTAL ENCEPHALITIS OF MICE, INDUCED BY WEST-NILE VIRUS

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36 antibiotics, related to 7 group were studied for antiviral activity. Antiviral effect was established in 3 preparations: kanamycin, gentamycin and neomycin. Here are the results of neomycin inhibitory activity study. It was demonstrated that the preparation is active in the dose of 0,5-5,0 mg/ml. When injected to mice of 5-6 g weight, infected with different virus doses (2-10 LD₅₀), it caused the increase in survival by 40-60% in experimental in comparison with the control. Viremia study in white mice, infected with 10 LD₅₀ of West-Nile virus showed that the virus content in mice blood decreased by 2,3-3,5 lg LD₅₀/0,03 ml in comparison with control. Taking into account the fact, that West-Nile virus is one the most widely spread arboviruses in Europe, Asia and Africa and it is pathogenic for humans, while chemotherapy and specific vaccines are not worked out yet, there is a prospect of use of antibiotics with antiviral properties as preparations for prophylaxis and therapy of this infection.