Poster Title:

Flu Pathogenesis Proteolytic Theory And Its Role In The Improvement of Flu's Treatment

BACKGROUND. Interaction of virus and cell in the pathogenesis of viral diseases is insufficiently studied. The main point here is penetration of virus into a healthy cell with an obligatory virus' deproteinization. However the deproteinization of viruses is studied insufficiently. First of all it refers to the mechanisms of introduction of flu virus in the cells of mammals, including humans. In this regard in 1983 we offered the new theory of flu pathogenesis with participation of proteinases-inhibitory system.

OBJECTIVE – to study the state and role antiproteinasis systems of the virus and recipient in the development of an influenza infection for receiving essentially new medical preparations on the basis of inhibitors of trypsin-like proteinases.

METHODS. In work presented we used flu viruses, A/PR/8/34 (H1N1), AO/32(H1N1) strains, white mice, chicken embryos, white rats, waste of γ-globulin and albumin manufacturing, human interferon and immunoglobulin, herpetic, gonococcus and tularemia vaccines and medicines: Influvac, Fluarix, Vaxigrip – anti-influenza vaccines, Avaxim – vaccine for hepatitis A and blood preparations - Fraxiparine, Solcoseryl.

RESULTS. It has been established that cleaning and concentration of influenza virus A various by different methods doesn't exempt virus from cellular enzymes – trypsin-like proteinases and their inhibitors. Both domestic (human immunoglobulin and interferon, anti-influenzal and herpetic vaccines), and foreign preparations (Influvac, Fluarix, Vaxigrip, Avaxim, Fraxiparine and Solcoseryl) had trypsin-like proteinase and its inhibitor in their structure. In the experiments on the white mice at infection with flu A virus there was a violation of proteinase - inhibitory balance, especially during the first hours after contamination. From the lungs of healthy mice six isoforms of trypsin-like proteinase have been allocated and antiproteinase immune serums were received to them. At the treatment of the animals infected with a lethal dose of flu A virus, only one serum (to the third isoform) has protected white mice from death. From the waste of γ-globulin manufacture of donor blood, inhibitor of trypsin - like proteinases which protected for 80% of white mice from death, was emitted.

CONCLUSIONS.
Endogenous inhibitors of human blood proteinases are perspective preparations in the fight with flu in humans.

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