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TOXICITY OF AEROSOLIZED APROTININ IN ANIMALS

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In animal models of Flu A and paramyxovirus infections, the aerosol delivery of aprotinin has been shown to be therapeutically superior to parenteral administration. The toxicity of aerosolized aprotinin (Contrycal - AWD, Germany) in young rats (50-60 g), adult rats (150 g), rabbits, and guinea pigs was studied. The aerosol mist was generated by an ultrasonic nebuliser (Musson-1; Trade Mark N25-2012; Altay Instrumental Plant, Russia) and was delivered to animals by means of fitting muzzle masks. The animals received 10-15 min inhalations of aprotinin daily for 30 days. As calculated on the basis of human-animal lung ventilation and body surface ratio, such regimen corresponds to 120 min inhalation a day for man. The aprotinin aerosol was highly tolerated by animals and the inhalations did not change the behaviour of animals. No significant changes occured in biochemical and hematologic values of blood; microscopic, morphometric, and histologic analysises of animal organs; cardiologic examination; the functional examination of CNS and psychometer tests. The inhalation of aerosolized aprotinin failed to possess a local irritant action and allergent reactions both active and retarted types. These data show that aerosolized aprotinin has no adverse side effects and provide clear rationale and safety for it clinical trials as antiviral against respiratory Influenza-like infections.

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Guinea Pig as a Model for Study of Marburg Virus Interraction with Mononuclear Phagocytes

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The study of interaction of Marburg virus with cells of MPS (mononuclear phagocytic system) of guinea pigs using complex of virologic methods and electron microscopy was carried out. Active reproduction of Marburg virus in peritoneal macrophages in vitro and in vivo was revealed. Performed study showed that cells of MPS were the first target-cells of guinea pigs intraperitoneally infected with Marburg virus. Virus multiplication in macrophages enhanced after the infection of the latter in the presence of the specific antiserum. Cells of MPS provided the virus dissemination into interstitial tissue of internals. Analysis of obtained data testified that viral alteration of MPS cells play important role in pathogenesis of disease caused by Marburg virus.