

THE INFLUENCE OF L-NAME ON INOS EXPRESSION AND MARKERS OF OXIDATIVE STRESS IN ALLERGIC-INDUCED AIRWAY HYPERREACTIVITY CONDITIONS

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Nitric oxide is a mediator which is responsible for various physiological and pathological processes in the airways. Its effect is influenced by the presence of the substrate activity of the isoforms of NO-synthase and NO metabolism. Inducible NO synthase iNOS which produce large amounts of NO is mainly active during inflammatory process. These amounts of NO quickly react and produce reactive oxygen and nitrogen forms with negative effects on the airways. We have focused on the detection of the expression of iNOS in the conditions of allergic inflammation in guinea pigs. The animals were without treatment and with treatment with the non-selective inhibitor L - NAME in a dose of 40 mg/kg b.w i.p during allergen evoked airway hyperreactivity conditions. In the animals was monitored the level of exhaled NO in in vivo condition and airway reactivity changes in in vitro conditions. The distal parts of the lung were collected for RT - PCR detection of the expression of iNOS venous blood was collected for detection of markers of oxidative stress by ELISA. We found that administration of L-NAME significantly affects the expression of iNOS in our model of AHR. The changes in the detection of markers of oxidative stress are questionable. Identified changes were not clear and we need other tests. Our results confirm that NO is involved in the regulation of the AHR changes depending on the activity of iNOS.

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