

## **EXPERIMENTAL ALLERGIC RHINITIS-RELATED COUGH AND AIRWAY EOSINOPHILIA IN SENSITIZED GUINEA PIGS**

M. Tatar<sup>1</sup>, M. Brozmanova, V. Bartos, and L. Plank

<sup>1</sup>Department of Pathophysiology and <sup>2</sup>Department of Pathological Anatomy, Jessenius Faculty of Medicine, Comenius University, Martin, Slovakia; [tatar@jfmmed.uniba.sk](mailto:tatar@jfmmed.uniba.sk)

Allergic rhinitis is one of the most common causes of chronic cough. The characteristic feature of allergic rhinitis is eosinophilic nasal inflammation. This study was undertaken to determine the relation between airway eosinophils and chemically-induced cough in guinea pigs with antigen-induced rhinitis at the early and late allergic response. Forty animals were sensitized with ovalbumin (OVA) and divided into four separated groups. Four weeks later sensitized animals were either singly or repeatedly (six times in 7-day interval) intranasally challenged with OVA to develop experimental allergic rhinitis. The control group was given saline. Citric acid-induced cough was evaluated at 30 min (early phase) or 24 h (late phase) after the 1<sup>st</sup> or 6<sup>th</sup> nasal challenge (NCh) in the sensitized animals. Cough was significantly increased in the sensitized animals at the early allergic response after the first and repeated NCh comparing with the control values [14(9-19) vs. 16(10-17) vs. 8(6-10); P=0.049] in contrast to the cough response with no significance evoked at the late phase. A correlation between the cough intensity after each NCh and the number of eosinophils from nasal mucosa ( $r=0.53$ ,  $P=0.008$ ) was found.

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