



Evaluation of the Effect of Prednisolone on the Inflammatory Process and Alveolar Diameter in Elastase- Induced Pulmonary Emphysema in Rats

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SUMMARY. This study evaluated the effect of prednisolone on acute lung inflammatory response, tissue damage and nitric oxide in elastase-induced emphysema in rats. A total of 32 male rats were divided into four groups: control and prednisolone groups received intratracheal instillation of saline; emphysema and emphysema + prednisolone groups received elastase. Prednisolone was administered in prednisolone and emphysema + prednisolone groups for 25 days by gavage. The results showed a significant increase in the alveolar airspace enlargement in the emphysema group. However, comparing control and emphysema + prednisolone groups, the treatment did not show significant reduction in the alveolar airspace enlargement. The number of leukocytes and nitric oxide level in BALF did not show statistically significant difference between groups. Despite widespread clinical use of corticosteroids in respiratory diseases, there was no direct protective effect on emphysema in treated animals, suggesting further studies related to its mechanism of action and on its clinical use in patients with emphysema.

KEY WORDS: Alveolar diameter, Anti-inflammatory, COPD, Glucocorticoids, Lung disease.

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