[Effects of Shenqi Bufei Tang on expressions of NF-kappaB, MMP-9 and TIMP-1 in airway remodeling of COPD rat model with lung-Qi deficiency syndrome].

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Title

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Authors

Zhang, K, Zhang, Y, Cheng, Y-J, Lu, L

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Abstract

OBJECTIVE: To observe the effects of Jiajian Bufei Tang on expressions of nuclear factor-kappaB (NF-kappaB), metalloproteinase (MMP-9) and tissue inhibitor of metalloproteinase-1 (TIMP-1) in the airway remodeling of COPD rat model with lung-Qi deficiency syndrome.

METHOD: Make quantitative stimulation with tobacco, SO2 and papin to establish COPD rat model with lung-Qi deficiency syndrome. Sixty male rats were randomly divided into: normal group (N), model group (M), low dose treatment group (LT), medium dose treatment group (MT), high dose treatment group (HT), and glucocorticoid treatment group (GCT). To observe the lung histopathological features. To measure the thinknesses of the airway wall and smooth muscle layer of the small airway by means of image analyzer, The NF-kappaB activity and the protein expressions of MMP-9 and TIMP-1 were examined by immunohistochemical analysis.

RESULT: The NF-kappaB activity and the protein expressions of MMP-9 and TIMP-1 in brouch and lung and the thinknesses of the airway wall and smooth muscle layer in the M group were significantly higher than those in the N group (P<0.01). After treatment, the NF-kappaB activity and the protein expressions of MMP-9 in the HT, MT and GCT group were lower than those in the M group (P<0.01), the GCT group was better than the HT, MT group. The protein expressions of
TIMP-1 in HT, MT group were lower than that in the M group. The thicknesses of the airway wall and smooth muscle layer were lower in the HT group than those in the M group (P<0.05).

**CONCLUSION:** Shenqi Bufei Tang may downregulate the NF-kappaB activity and the protein expressions of MMP-9 and TIMP-1 and intervene in the airway remodeling of COPD rat model with lung-Qi deficiency syndrome.