



Effect of curcumin on p38MAPK expression in DSS-induced murine ulcerative colitis

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ABSTRACT. The aim of this study was to determine the therapeutic effect of curcumin on dextran sulfate sodium-induced ulcerative colitis (UC) and to explore the related mechanism. Sixty mice were randomly divided into 6 groups. A group was the normal control group; B group was the model group; C group was the 1.5 mg/kg dexamethasone group based on the B group; and D, E and F groups were 15, 30, and 60 mg/kg curcumin groups, respectively, based on the B group. The mice were killed 7 days after treatment; the expression of TNF- α and MPO in colon tissue was determined with ELISA, and colon p-p38MAPK and p38MAPK mRNA expression was evaluated by immunohistochemistry and RT-PCR, respectively. In the C, D, E, and F groups, TNF- α and MPO levels significantly decreased ($P < 0.05$), and the expression of p-p38MAPK also significantly decreased ($P < 0.01$). The expression of p38MAPK mRNA in the C, D, E, and F groups decreased ($P < 0.01$), and there was a statistically significant difference between the E and F

groups ($P < 0.01$). Curcumin had a therapeutic effect, which probably played a role in UC treatment by inhibiting the p38MAPK signaling pathway, thereby reducing the release of TNF- α .

Key words: Curcumin; Ulcerative colitis; p38 MAPK