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川芎嗪抑制IL-1β诱导的兔软骨细胞caspase-8和Cy到：

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Title: Tetramethylpyrazine inhibits expression of caspase-8 and CytC in rabbit articular chondrocytes induced by interleukin-1β

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关键词: 川芎嗪; 软骨细胞; 白细胞介素1β; caspase-8; CytC

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摘要: 目的 观察川芎嗪(tetramethylpyrazine,TMP)对白介素-1β（interleukin-1β，IL-1β）诱导的兔原代软骨细胞caspase-8和CytC表达的影响。 方法 体外培养兔软骨细胞，用甲苯胺蓝染色检测蛋白多糖、免疫荧光检测兔原代软骨细胞Ⅱ型胶原；分为对照组、IL-1β 10 ng/mL单独作用组、IL-1β 10 ng/mL和不同浓度TMP联合作用组，按分组方法培养兔软骨细胞48 h，用Western blot和免疫组化检测caspase8蛋白表达；用ELISA法检测细胞内CytC的表达。 结果 软骨细胞呈三角形或多角形，贴壁生长。蛋白多糖表达于细胞质中，Ⅱ型胶原主要表达于细胞质，少见于细胞核。实验组与对照组比较， IL-1β单独作用及IL-1β联合TMP作用软骨细胞后，caspase-8和CytC的表达均显著增加 ($P<0.01$)。实验组之间比较，IL-1β+15 μg/mL川芎嗪联合作用组caspase-8和CytC的表达显著低于IL-1β单独作用组（$P<0.05$,$P<0.01$）。 结论 川芎嗪能有效抑制IL-1β诱导兔软骨细胞caspase-8和CytC的表达，从而起到抑制细胞凋亡的作用。

Abstract: Objective To determine the effect of tetramethylpyrazine (TMP) on the expression of caspase-8 and CytC in interleukin-1β (IL-1β) induced rabbit articular chondrocytes. Methods The chondrocytes derived from the joint of rabbits were isolated and primarily cultured. Toluidine blue staining was used to detect proteoglycan, and immunofluorescence assay was employed to detect collagen type Ⅱ to identify rabbit primary cartilage cells. Rabbit cartilage cells were divided into control group, IL-1β group (10 ng/mL), IL-1β plus TMP groups

(10 ng/mL IL-1β plus TMP at different concentrations of 5, 10, 15, and 20 μg/mL respectively) for 48 h. Caspase-8 expression was detected by Western blotting and immunohistochemical assay. And the intracellular expression of CytC was measured by ELISA. Results Our obtained primarily cultured chondrocytes grew in adherence, in a triangle or polygon shape. Proteoglycan and collagen type Ⅱ were mainly expressed in the cytoplasm, but the later was rarely located in the nucleus. Compared with the control cells, the expression of caspase-8 and CytC was significantly enhanced in the chondrocytes treated by IL-1β alone or combined with TMP at different concentrations (P<0.01), and the expression was obviously lower in the cells treated by IL-1β+15 μg/mL TMP than in the cells treated by IL-1β alone (P<0.05,P<0.01). Conclusion TMP inhibits the expression of caspase-8 and CytC in rabbit chondrocytes induced by IL-1β, and thus, suppresses cell apoptosis.

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