

论著

葡多酚对小鼠移植性乳腺癌MMP-2蛋白表达的抑制作用研究

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收稿日期 2006-3-11 修回日期 2006-4-13 网络版发布日期:

摘要 背景与目的: 探讨葡多酚 (grape proanthocyanidins, GPC) 对小鼠乳腺癌基质金属蛋白酶-2 (Matrix metalloproteinase-2, MMP-2) 蛋白表达的抑制作用。方法与材料: 将接种EMT-6乳腺癌细胞的40只雌性BALB/C小鼠随机分为肿瘤对照组和GPC (10、100、200mg/kg) 三个剂量组, 每组10只。GPC组小鼠于接种前一天经口灌胃, 每天1次, 连续2周。对照组只给予等量生理盐水。用Western blot与免疫组织化学方法检测肿瘤组织中MMP-2蛋白的表达、用MTT法分析肿瘤细胞增殖活性及瘤重、抑瘤率等指标。结果: 100和200 mg/kg GPC组均能明显抑制MMP-2蛋白的表达和肿瘤细胞增殖活性。Western blot检测结果显示, 该两组MMP-2表达水平分别为 0.73 ± 0.04 和 0.69 ± 0.04 , MTT法测定肿瘤细胞增殖活性分别为 0.81 ± 0.21 和 0.71 ± 0.11 , 与肿瘤对照组相比差别均有统计学意义 ($P < 0.05$)。10 mg/kg GPC组与肿瘤对照组间无明显差别, ($P > 0.05$)。结论: GPC对乳腺癌组织MMP-2蛋白的表达和细胞增殖活性有明显的抑制作用。

关键词 [葡多酚](#) [乳腺癌](#); [基质金属蛋白酶-2](#)

Inhibitory Effect of Grape Proanthocyanidins on MMP-2 of Mice Breast Cancer

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Abstract **BACKGROUND & AIM:** To investigate the inhibition of grape proanthocyanidins (GPC) on MMP-2 protein of breast cancer tissue. **MATERIAL AND METHODS:** Forty female BALB/c mice inoculated with EMT-6 breast cancer cells were divided into tumor-control group and 10、100 and 200mg/kg GPC groups. GPC experimental groups were given different dose of GPC by mouth once a day for two weeks. Mice in control group were given equal amount of normal salt solution only. MMP-2 protein in tumor tissues was assessed by Western blot and immunohistochemistry. The proliferation of cancer cells were evaluated by MTT assay, and the weights of the tumor in each group were compared also. **RESULTS:** 100、200 mg/kg GPC could inhibit the expression of MMP-2 protein and the proliferation of breast cancer cells. The expression of MMP-2 protein in the 100、200 mg/kg GPC groups were 0.73 ± 0.04 and 0.69 ± 0.04 respectively, by western bolt and the proliferation of cancer cells were 0.81 ± 0.21 and 0.71 ± 0.11 respectively, by MTT assay. Compared with the control group, the differences were significantly ($P < 0.05$). There was no difference between 10 mg/kg GPC group and the tumor control group. **CONCLUSION:** GPC could inhibit the expression of MMP-2 protein and proliferation of breast cancer cells.

Keywords [grape proanthocyanidins](#) [breast neoplasms](#) [matrix metalloproteinase-2](#)

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