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论著

姜黄素对DMBA诱发的地鼠口腔癌预防作用

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摘要 背景与目的： 选用二甲基苯并蒽(7,12-dimethylbenz(a)anthracene,DMBA)诱发金黄色地鼠口腔癌模型，进行了姜黄素对口腔癌的预防作用研究，并探讨其防癌机制。 材料与方法： 试验设阳性对照组(局部涂0.5 % DMBA,每周三次，共14周)、二个姜黄素组(在涂DMBA2周前开始分别涂5 μmol/L和10 μmol/L姜黄素至14周实验结束)和阴性对照组(仅涂石蜡油)。 结果： 10 μmol/L姜黄素处理显著降低了口腔肿瘤发病率和癌发病率， 5 μmol/L对肉眼肿瘤数目和体积、异常增生及癌数目的抑制分别降低了33.8 %、 36.3 %、37.6 %和29.0 %。10 μmol/L分别降低了46.0 %、 63.7 %、44.7 %和37.0 %。此外，姜黄素处理均抑制了单纯增生和异常增生组织的微核形成和单纯增生、异常增生和癌组织的Brdu增殖指数。 结论： 姜黄素对DMBA诱发的地鼠口腔癌有预防作用，其机制与保护DNA损伤、抑制细胞增殖有关。

关键词 姜黄素 口腔癌 化学预防

Chemopreventive Effect of Curcumin on DMBA-induced Oral Carcinogenesis in Hamsters

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Abstract BACKGROUND & AIM: The preventive effects of curcumi on 7,12-dimethylbenz (a)anthracene (DMBA)-induced oral carcinogenesis in golden syrian hamster were studied. MATERIALS AND METHODS: The hamsters were divided into four groups, i.e. the positive control group (the left buccal pouches of animal were topically treated with 0.5 % DMBA in mineral oil three times per week for 14 weeks) ,two curcumin treated groups and the negative control group (mineral oil applied topically). The animals in curcumin treated groups received 5 and 10 μmol/L curcumin applied topically 3 times per week before starting the DMBA treatment and until the end of the experiment. RESULTS: Ten μmol/L curcumin significantly decreased the oral visible tumor incidence from 95.0 % to 60.0 % (P<0.01) and the squamous cell carcinoma (SCC) incidence from 85.0 % to 55.0 %(P<0.01). Five μmol/L curcumin significantly decreased the number of visible tumors, the tumor volume, as well as the numbers of dysplasic lesions and SCC by 21.0 %, 36.3 %, 29.9 % and 29.3 %, respectively. Ten μmol/L curcumin decreased significantly by 36.8 %,63.8 %,37.2 % and 44.4 %, respectively. Curcumin also decreased the frequency of micronucleated cells in hyperlasis, dysplasia and bromodeoxyuridine (BrdU)-labeling index in hyperlasis, dysplasia and Carcinoma, but do not have effect on cell apoptosis. CONCLUSIONS: The results suggested that curcumin could effectively inhibit DMBA-induced oral carcinogenesis in hamsters and such inhibition may be related to protecting DNA damage, the suppression of cell proliferation.

Keywords curcumin oral cancer chemoprevention

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