

论著

天然蛇床子素的抗肿瘤活性实验研究

周则卫 沈秀 吴小霞 刘培勋 徐文清 李锐

中国医学科学院中国协和医科大学, 放射医学研究所, 天津 300192

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摘要 背景与目的: 蛇床子素是天然存在的香豆素化合物, 本研究旨在检测天然蛇床子素在小鼠体外和体内的抗肿瘤活性。材料与方法: 体外蛇床子素对人肺腺癌细胞A549和人肝癌细胞Bel-7402的抗肿瘤实验采用MTT法, 并计算IC50; 体内蛇床子素对小鼠肝癌H22实体瘤的抗肿瘤实验采用常规的抗肿瘤实验方法, 用昆明种小鼠, 雌雄各半, 设空白对照组、顺铂(5 mg/kg)和香菇多糖 (1 mg/kg)2个阳性对照组和1.11、1.67、2.50 mg/kg 3个剂量蛇床子素给药组, 每组12只小鼠; 用蛇床子素给小鼠灌胃后观察抑瘤率和胸腺、脾指数及肝重量变化, 采用t检验进行数据的统计学处理。结果: 蛇床子素体外对肺腺癌细胞A549和人肝癌细胞Bel-7402的半数抑制浓度IC50分别为: 67.83、123.92 μg/ml; 体内对小鼠肝癌H22实体瘤抑瘤率达62%~73%, 各给药组与空白对照组比较差异均具有统计学意义(P<0.01), 脏器指数及重量与空白对照组比较差异均无统计学意义(P>0.05), 而与阳性对照顺铂组间的差异具有统计学意义(P<0.01)。结论: 蛇床子素体外和体内对实验肿瘤均有明显的抗肿瘤活性, 而且在给药剂量下实验动物未出现任何毒性反应。

关键词 [蛇床子素](#); [香豆素](#); [抗肿瘤](#)

Experimental Research on Anti-tumor Activities of Natural Osthole

ZHOU Ze-wei, SHEN Xiu, WU Xiao-xia, LIU Pei-xun, XU Wen-qing, LI Rui

Chinese Academy of Medical Sciences & China Union Medical College, Institute of Radiation Medicine, Tianjin 300192, China

Abstract **BACKGROUND & AIM:** Osthole is a natural coumarin compound, this paper reports on the anti-tumor activities of osthole in vitro and in vivo. **MATERIALS AND METHODS:** In vitro, anti-tumor assay was performed with human pulmonary adenoma cells A549 and liver cancer cells Bel-7402, MTT method was employed, and half-inhibitory concentration (IC50) were recorded. In vivo, mouse liver cancer H22 was selected and conventional assay method was employed. Three different doses of osthole were administered orally, and tumor inhibitory percentage, thymus gland, spleen indexes and liver weight were measured. **RESULTS:** IC50 of osthole in A549 and Bel-7402 cells were 67.83 μg/ml and 123.9 μg/ml, respectively. In vivo tumor inhibitory rates in H22 sarcoma was 62%~73%, All osthole-treated groups compared with control animals revealed statistical significance(P<0.01). But osthole groups showed small differences in spleen index, thymus index, and liver weight compared with control mice(P>0.05). Nevertheless differences, when compared with the positive control drug cis-platinum (5 mg/kg dosage), thymus index, spleen index and liver weight were statistically different(P< 0.01). **CONCLUSION:** Osthole had obvious anti-tumor activities in vitro and in vivo, and did not reveal any toxic effects in experimental animals with the administered doses.

Keywords [osthole](#); [coumarin](#); [anti-tumor](#)

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