

论著

阿司匹林对S180肿瘤生长及血管生长相关因子表达的抑制作用

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摘要 目的 从抗血管生成的角度研究阿司匹林(Asp)预防和治疗肿瘤的机理。方法 昆明种小鼠随机分为对照组, 替加氟组, Asp 50, 25, 10 mg·kg⁻¹组, 于接种S180肿瘤细胞后d 2开始ig给药, 连续9 d, 观察抑瘤率。采用免疫组化的方法研究Asp对肿瘤组织环氧合酶-2(COX-2)及血管相关生长因子的作用。结果 Asp 3个剂量组均有一定的抑瘤作用, 大剂量抑瘤率为21.1%。免疫组化染色显示Asp对肿瘤组织的COX-2表达有明显的抑制作用, 同时血管生长相关因子血管内皮生长因子、纤维细胞生长因子-2表达也明显下调, 肿瘤组织微血管密度明显降低。结论 Asp对S180肿瘤有抑制作用, 它可以抑制与血管生长相关的COX-2的表达而抑制肿瘤血管的生长, 进而抑制肿瘤的生长。抑制肿瘤血管的生长可能是Asp预防和治疗肿瘤的机理之一。

关键词 [阿司匹林](#) [细胞](#) [S180肉瘤](#) [前列腺素内过氧化物合酶](#) [物质](#) [内皮生长](#) [血管](#) [成纤维细胞生长因子](#) [碱性](#)

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Inhibitory effects of aspirin on the transplanted sarcoma S180 and the expression of angiogenesis related factors

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Abstract

AIM To investigate the antiangiogenesis by which aspirin exerts its tumor chemopreventive and chemotherapeutic effects. **METHODS** Kunming mice were randomizedly divided into control group, tegafur (3 mg per mouse) positive group and aspirin 50, 25, 10 mg·kg⁻¹ groups. One day after inoculation of 0.2 mL S180 cell(2.5×10¹⁰ L⁻¹) suspension, tegafur and aspirin was given by gastric intubation for 9 d. The inhibition rate on S180 was calculated routinely. The expression of cyclooxygenase-2(COX-2), vascular endothelial growth factor(VEGF), fibroblast growth factor-2(FGF-2) and microvessel density(MVD) was detected by immunohistochemical staining. **RESULTS** The growth of sarcoma S180 was significantly inhibited by aspirin at the dose of 50 mg·kg⁻¹, with the inhibitory rate 21.1%. The expression of COX-2 in the tumor tissue was also inhibited by aspirin. And accordingly the expression of VEGF, FGF-2 and MVD was also markedly inhibited dose-dependently by aspirin. **CONCLUSION** Aspirin has inhibitory effects on sarcoma S180, and it decreases the expression of COX-2 in tumor tissue. There has positive relation between the expression of COX-2 and angiogenesis related factor. Antiangiogenesis may be one of mechanisms by which aspirin exerts its tumor chemopreventive and therapeutic effects.

Key words [aspirin](#) [cells](#) [sarcoma 180](#) [prostaglandin](#) [endoperoxide synthase](#) [substance](#) [endothelial growth](#) [vascular](#) [fibroblast growth factor](#) [basic](#)

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