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消癌平抗鼠H22肝细胞癌生长和血管生成的实验

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Effect of Xiaoaiping on Growth and Angiogenesis of H22 Hepatic Carcinoma in Mice

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摘要 目的

通过观察不同浓度消癌平（XAP)对小鼠移植瘤血管生成的影响，探讨XAP抑制肝细胞癌生长可能的作用机制。方法 昆明小鼠75只，接种H22肝癌细胞。随机分为D1、D2、X1、X2、X3组，其中D1、D2组分别腹腔注射5-氟尿嘧啶（5-Fu）、0.9%氯化钠溶液做为阳性、阴性对照，X1、X2、X3组分别给予10 g/(kg·d)、20 g/(kg·d)、40 g/(kg·d)的XAP腹腔注射。计算各瘤体体积，绘制肿瘤生长曲线；用药3周后剥离瘤体，称量，计算抑瘤率；光学显微镜下观察组织病理变化；免疫组织化学法检测瘤组织中CD34所标记的微血管密度；酶联免疫吸附实验（ELISA）检测血清中血管内皮生长因子（VEGF）含量。结果X3组与D1组抑瘤率相近（$P>0.05$）；X1、X2、X3组血清VEGF均低于D2组（$P<0.05$），其中X3组降低最为明显；MVD也得到同样的结果。结论不同剂量的XAP均可抑制H22肝癌小鼠移植瘤的生长，且40 g/(kg·d)抑制作用最佳。XAP可能是通过抑制VEGF的生成，从而降低肿瘤组织中MVD，使得局部肿瘤组织缺血、坏死，进而抑制肿瘤的生长。

关键词： 消癌平 H22肝癌 血管内皮生长因子 微血管密度 血管生成

Abstract： Objective

To study the effects of Xiaoaiping(XAP) with different concentrations on the tumor angiogenesis in mice and to discuss its possible mechanism in the inhibition of hepatic cellular cancer growth.MethodsSeventy-five female KM mice whose weight is about(20±2)g were injected H22 liver tumor cells.They were randomly divided into five groups as following:D1(5-fluorouracil(5-Fu) was peritoneal injected,as a positive control),D2(NS was peritoneal injected,as a negative control),groups X1,X2 and X3 were peritoneal injected with XAP of 10 g/(kg·d),20 g/(kg·d) and 40 g/(kg·d) respectively.The tumor′s volume was calculated to draw the tumor growth curve.The tissue of xenografted tumors was taken after 3 week′s treatment.The xenografted tumors were weighted its inhibitory rate was calculated.The pathological changes were observed by light microscope.The microvessel density(MVD) marked by CD34 in the xenografted tumor tissue was detected by immunohistochemisty.The concentration of serum VEGF was measured by ELISA.ResultsThe inhibition rate in X3 and D1 group was similar($P>0.05$).The doses of serum VEGF in X1,X2 and X3 group were all lower than that in D2 group($P<0.05$),especially in X3group.To detect MVD,the conditions were the same as the dose of serum VEGF.ConclusionDifferent doses of XAP can inhibit tumor growth of H22 liver cancer in mice and the medium dose of XAP has the best inhibition.XAP may reduce VEGF and decrease MVD in tumor to make tumor ischemia and necrosis in order to inhibit tumor growth.

Key words： XAP H22 liver cancer Vascular Endothelial Growth Factor Microvessel Density Angiogenesis

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