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论著

桂枝茯苓丸对荷瘤鼠肿瘤细胞凋亡的影响

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摘要 背景与目的： 探讨桂枝茯苓丸方剂诱导肿瘤细胞凋亡机制，为桂枝茯苓丸(GFW)开发应用提供实验依据。 材料与方法： 取30只小鼠，每只鼠右侧腋下皮下注射0.2 ml的S180瘤细胞悬液，将其随机分为模型组、中药(GFW)组、环磷酰胺(CP)组，每组10只，另取10只未荷瘤小鼠作为正常对照。模型组用生理盐水灌胃，每天0.02 ml/g；中药组用GFW给小鼠灌胃，每天 0.02 ml/g；环磷酰胺组于小鼠腹腔注射CP，每天20 mg/kg。各组小鼠均于接种后次日给药,每天给药1次，连续10 d后，小鼠脱颈处死，取腋下实体瘤，计算抑瘤率，流式细胞仪测定细胞凋亡率，电镜观察肿瘤细胞超微结构。原位杂交法检测Survivin mRNA表达。 结果： GFW抑瘤率为38.93%，流式细胞仪检测GFW组细胞凋亡率17.79%，与模型组比较差异均具有统计学意义(P均<0.05)。GFW组镜下可见瘤细胞以凋亡变化为主。内膜结构完好，核膜清晰，细胞核固缩，染色质团块状散布核内或边集核膜下，并可见凋亡小体。GFW下调肿瘤细胞Survivin mRNA表达，与模型组比较，差异有统计学意义(P<0.01)。 结论： GFW诱导肿瘤细胞凋亡，其机制可能与下调Survivin mRNA表达密切相关。

关键词 桂枝茯苓丸； 凋亡； Survivin mRNA

The Effects of GFW on the Apoptosis of Tumor Cells in Mice

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Abstract BACKGROUND & AIM: To study the effects of GFW on tumor apoptosis and to provide basis for the development of GFW. MATERIALS AND METHODS： Each of the 30 mice received 0.2 ml S180 tumor cell suspension subcutaneously in the right axilla . The mice were randomly divided into model group,GFW group and CP group and with 10 mice in each group.Another 10 mice without cancer were used as control. The model group received intragastric normal saline,0.02 ml/(g·d); the GFW group was given intragastric administration,0.02 ml/(g·d) whilst the CP group received intraperitoneal injection of CP at 20 mg/(kg·d),The medicines were given to the mice in each group after they were inoculated, once a day for 10 days .The mice were sacrificed and the tumor removed. The S180 mice sarcoma model was employed to detect the inhibiting effects of GFW, the flow cytometer was used for determination of apoptosis and the ultrastructural changes assessed by electron microscope.The expression of Survivin mRNA was evaluated by situ hybridization. RESULTS: For S180 sarcoma ,the tumor inhibition by GFW was 38.93%. The apoptosis in GFW group was 17.79% by flow cytometer. Some typical apoptotic cells and apoptotic bodies were identified through electron microscope. Chromatin gathered on the side of the cell, while the nucleus was condensed. Survivin mRNA was markedly suppressed in the GFW group when compared with the model group. CONCLUSION: GFW induced tumor cell apoptosis, and its mechanism might be closely related with down_regulating the expression of the survivin gene.

Keywords GFW apoptosis Survivin mRNA

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