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DC-CIK共培养细胞联合索拉菲尼对肝癌细胞体内外的杀伤效应 点此下载全文

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摘要：

目的：观察DC、CIK共培养细胞（DC-CIK）联合索拉菲尼(sorafenib)对肝癌细胞BEL-7402的体内外杀伤效应。方法：取健康人外周血单个核细胞，加入不同细胞因子促进DC及CIK细胞成熟并混合共培养。CCK8试剂盒检测DC-CIK共培养细胞联合索拉菲尼对BEL-7402细胞的体外杀伤效应，Annexin V-FITC试剂盒检测两者联合对肝癌细胞凋亡率的影响。用肝癌细胞BEL-7402建立裸鼠皮下移植瘤模型，分为生理盐水对照组、索拉菲尼组、DC-CIK组、DC-CIK+索拉菲尼组，观察它们对裸鼠移植瘤生长的抑制作用。结果：联合组对肝癌细胞的杀伤率及诱导凋亡率均明显高于各单独治疗组，联合组杀伤率高达（75.24±1.91）%，是DC-CIK组的1.8倍，是索拉菲尼单药组的2.1倍（P<0.01）；联合组诱导肝癌细胞凋亡率达（78.32±2.54）%，与单独治疗组相比差异有统计学意义（P<0.05）。体内实验表明，DC-CIK+索拉菲尼组可明显抑制裸鼠BEL-7402移植瘤的生长，抑制率为（83.37±0.16）%，与单独治疗组相比差异有显著统计学意义（P<0.01）。结论：DC-CIK共培养细胞联合索拉菲尼在体内、外可显著抑制肝癌细胞的生长，分子靶向治疗联合细胞免疫治疗可能成为肝癌综合治疗的方法之一。

关键词：肝肿瘤 树突状细胞 细胞因子活化的杀伤细胞 索拉菲尼

In vitro and in vivo cytotoxicity effects of co-cultured DC CIK cells combined with sorafenib against hepatocellular carcinoma Download Fulltext

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Abstract:

Objective:To investigate the in vitro and in vivo inhibitory effects of DC (dendritic cell) CIK (cytokine induced killer cell) co cultured cells combined with sorafenib against hepatocellular carcinoma cell line BEL 7402. Methods: DC and CIK cells were generated in vitro by stimulating human peripheral blood mononuclear cells with different cytokines, and then they were co cultured. The cytotoxicity of DC CIK co cultured cells (DC CIK) combined with sorafenib against BEL 7402 cells was determined by CCK8 kit. The apoptosis of BEL 7402 cells was measured by Annexin V FITC Kit. BEL 7402 implanted tumor model was established by subcutaneous injection in nude mouse. Tumor bearing mice were divided into normal saline control group, sorafenib group, DC CIK group and DC CIK+sorafenib group. The inhibitory effects were observed in different groups. Results: The cytotoxicity rate of BEL 7402 cells in DC CIK+ sorafenib group was significantly higher than those in the other two groups, with cytotoxicity rate in DC CIK+sorafenib group being (75.24±1.91)%, which was 1.8 times that in DC CIK group and 2.1 times that in sorafenib group (P <0.01). The apoptosis rate of BEL 7402 cells in DC CIK+sorafenib group was significantly higher than those in the sorafenib and DC CIK groups, with the apoptosis rate in DC CIK+sorafenib group being (78.32±2.54)% (P <0.05). The volume of tumor in the combination group was significantly smaller than those in the other groups (P <0.05). In vivo results showed that DC CIK+sorafenib treatment significantly inhibited the growth of BEL 7402 implanted tumors, and the inhibitory rate was (83.37 ±0.16)%, which was significantly higher than those of the other groups (P <0.01). Conclusion: DC CIK co cultured cells combined with sorafenib can inhibit the growth of hepatocellular carcinoma cell line BEL 7402 in vitro and in vivo . Molecular targeting therapy combined with immunotherapy may be a new way for the comprehensive treatment of hepatocellular carcinoma.

Keywords:hepatocarcinoma dendritic cell cytokine induced killer cell sorafenib

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