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益气养阴解毒方含药血清对Lewis肺癌细胞增殖及凋亡影响的体外实验

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Experimental Research on Effect of Medicated Serum contained with Yiqiyangyinjiied and Apoptosis of Lewis Lung Cancer Cells in vitro

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- 摘要
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全文: PDF (1254 KB) HTML (0 KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 目的观察益气养阴解毒方含药血清对体外培养Lewis肺癌细胞(LLC)增殖和凋亡的影响。方法采用血清药理学方法,用SD大鼠制备益气养阴解毒方低、中、高剂量、顺铂(DDP)、益气养阴解毒方联合DDP、0.9%氯化钠溶液(NS)含药血清,体外培养LLC,采用MTT法测各组血清对LLC增殖的影响,流式细胞仪(FCM)Annexin V- FITC/PI标记法检测细胞凋亡率,免疫组织化学(SP法)测Caspase-3表达水平。结果益气养阴解毒方含药血清能够抑制体外培养LLC生长,且呈浓度和时间依赖性,高浓度作用72h抑制率达50%,中药联合DDP抑制率最高达94.67%;与对照组比较,各组含药血清均具有诱导LLC细胞凋亡的作用,并呈剂量和时间依赖关系,中药联合DDP作用最强,作用72h时,细胞凋亡率下降,而坏死率升高;凋亡相关蛋白Caspase-3的表达与药物剂量及作用时间呈依赖性,差异有统计学意义(P<0.05),与其他各组比较,中药联合DDP作用最强(P<0.05)。结论益气养阴解毒方具有抑制LLC增殖及诱导其凋亡的作用,促进Caspase-3蛋白表达可能是其诱导LLC凋亡机制之一。

关键词: 益气养阴解毒方 血清药理学 Lewis肺癌 细胞凋亡 Caspase-3

Abstract: Objective To observe the effect of medicated serum contained with yiqiyangyinjiiedu recipe on proliferation and apoptosis of Lewis lung cancer cells(LLC) in vitro. Methods A total of 30 male rats were divided into Low, medium, high dose Yiqiyangyinjiiedu recipe, Cisplatin(DDP), Yiqiyangyin recipe combined with DDP and normal saline (NS) group. The medicated serum was prepared by the serum pharmacology method. Then the serum was added to LLC in vitro. The proliferation of LLC was measured by methyl thiazolyl tetrazolium(MTT) method. The cell apoptosis were measured by flow cytometry(FCM) and Annexin V- FITC/PI. Immunohistochemistry (SP method) measured the expression levels of Caspase-3. Results Yiqiyangyin detoxification recipe containing drug serum had a remarkable growth-inhibition on LLC in vitro, these effects showed characters being time-dependent and concentration-dependent. Effect of high concentrations on LLC in 72h, the growth inhibiting rate(IR) was 50%. Inhibiting rate of yiqiyangyin detoxification recipe joint DDP containing drug serum up to 94.67%. Compared with the control group, each group containing serum can induce apoptosis of LLC, and showed characters being time-dependent and concentration-dependent. Yiqiyangyin detoxification recipe joint DDP containing drug serum on LLC for 72h, the apoptosis rate declined and the necrosis increase. Expression of Caspase-3 was being dose and time dependent manner(P<0.05). Compared with other groups, expression of Caspase-3 of chinese combined DDP was highest (P<0.05). Conclusion Yiqiyangyin detoxification recipe can inhibit proliferation and induce apoptosis of LLC. The promotion of Caspase-3 protein expression may be one of the mechanisms of inducing apoptosis of LLC.

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