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奥沙利铂对肝癌HepG2细胞生长及侵袭转移的抑制作用

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Effects of Qxaliplatin Inhibition of Tumor Growth, Invasion and Metastasis Properties of Human Hepatocarcinoma Cells in vitro

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摘要 目的 观察奥沙利铂（L-OHP）对人肝癌HepG2细胞生长、凋亡、黏附及侵袭行为的影响。方法 分别采用MTT法及AnnexinV / PI 双染色流式细胞术检测不同浓度L-OHP对肝癌HepG2细胞生长及凋亡的影响；分别以MTT法及Transwell实验检测L-OHP对HepG2细胞黏附、迁移及侵袭力的影响。结果 在（10.0～40.0）mg/L浓度的L-OHP作用下，HepG2细胞增殖明显降低，抑制作用呈浓度和时间依赖性（$P<0.01$）；5.0 mg/L以下浓度无明显的细胞毒作用；（2.5～10.0）mg/L的L OHP可使凋亡细胞明显增多($P<0.05$)；无毒剂量（2.5 mg/L）的L-OHP作用时，HepG2细胞的黏附力明显下降（$P<0.05$），30、60、90 和120 min的黏附抑制率分别为29.2%、27.3%、26.6% 和24.8%；HepG2细胞的迁移及侵袭细胞数明显减少（$P<0.01$），迁移、侵袭抑制率分别为53.68% 和54.38%。结论 L-OHP既可通过抑制肝癌细胞增殖、诱导凋亡，又可通过抑制肝癌细胞黏附、迁移、侵袭能力发挥抗转移的作用。

关键词： 肝癌 奥沙利铂 增殖 黏附 侵袭

Abstract： Abstract:Objective To investigate the effects of oxaliplatin on inhibiting the proliferation,apoptosis, adhesion,and invasion of human Hepatocarcinoma cells (HepG2) in vitro. Methods MTT assay and AnnexinV/PI flow cytometry were used to examine the effect of oxaliplatin on the proliferation and apoptosis of the HepG2 cells, respectively. The adhesion of the cells was measured by MTT assay. The migration and invasion ability were tested with Transwell (Boyden chamber) and matrigel, respectively. Results The proliferation of the HepG2 cells was inhibited by oxaliplatin in the concentration of （10.0～40.0） mg/L and in a dose and time dependent manners ($P<0.01$). Oxaliplatin in the concentration of 2.5 and 5.0 mg/L had no obvious effects on the incidence of proliferation. The number of apoptosis of HepG2 cells treated with oxaliplatin in the concentration of （2.5～10.0） mg/L for 24h was increased ($P<0.05$). HepG2 cells co incubated with oxaliplatin in the concentration of 2.5 mg/L for 30,60,90 and 120 min showed higher cell adhesion than the control group($P<0.05$).The adhesion inhibition ratios were 29.2%,27.3%,26.6% and 24.8%, respectively. In addition, the ratio of migration and invasion for the HepG2 cells treated with oxaliplatin in the concentration of 2.5 mg/L for 24h was significantly reduced compared with that in the control groups($P<0.01$). The migration and invasion inhibition rate were 53.68% and 54.38%, respectively. Conclusion Oxaliplatin may play an anti metastatic role not only in inhibiting cells proliferation and induce apoptosis, but also in inhibiting the adhesion, migration and invasion of HepG2 cells in vitro.

Key words： Hepatocellular carcinoma Oxaliplatin Proliferation Adhesion Invasion

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