

论著

Ras 反义寡核苷酸对胰腺癌 P c -2细胞多药耐药的影响

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摘要 摘要: 目的 探讨Ras反义寡核苷酸(A S O D N)对胰腺癌P c -2细胞多药耐药的影响。方法 应用Ras A S O D N抑制P c -2细胞中Ras和P-gp蛋白(P-glycoprotein, P-gp)表达,采用MTT法测定P c -2细胞化疗敏感性,荧光定量RT-PCR法检测细胞内MDR-1基因水平,流式细胞仪检测细胞内阿霉素(ADR)浓度的改变。结果 Ras A S O D N能明显抑制胰腺癌P c -2细胞中Ras和P-gp蛋白的表达($P < 0.05$),提高P c -2细胞的化疗敏感性($P < 0.05$),降低P c -2细胞中MDR-1基因水平($P < 0.05$),增加P c -2细胞中的ADR摄入量($P < 0.05$)。结论 Ras A S O D N可能通过调控MDR-1基因水平,增加多药耐药胰腺癌P c -2细胞对化疗药物的敏感性。

关键词 胰腺癌 多药耐药 Ras

分类号

E f f e c t s o f R a s A n t i s e n s e O l i g o d e x y n u c l e o t i d e o n M u l t i d r u g R e s i s t a n c e o f P a n c r e a t i c C a r c i n o m a P c - 2 C e l l s

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Abstract Abstract: Objective To investigate the role of Ras antisense oligodeoxynucleotide (ASODN) in multidrug resistance (MDR) of pancreatic carcinoma P c -2 cells. Methods Ras and P-gp expression was suppressed by Ras ASODN. Sensitivity of P c -2 cells to chemotherapy was determined by the MTT assay. MDR-1 mRNA level was detected by fluorogenic probe quantitative reverse transcription polymerase chain (RT-PCR) method. Flow cytometry (FCM) was used to detect the accumulative concentration of adriamycin (ADR) in the cells. Results Ras ASODN significantly inhibited the Ras and P-gp expression ($P < 0.05$), increased the sensitivity of P c -2 cells to chemotherapeutic agents ($P < 0.05$), decreased MDR-1 gene level in P c -2 cells ($P < 0.05$), and increased the intracellular intake of ADR in P c -2 cells ($P < 0.05$). Conclusion Ras ASODN may enhance the sensitivity of multidrug-resistant pancreatic cancer P c -2 cells to chemotherapeutic agents by regulating MDR-1 gene level.

Key words pancreatic carcinoma multidrug resistance Ras

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