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S100A4在卵巢癌组织中的表达与铂类化疗耐药的关系

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Correlation between Expression of S100A4 and Cisplatin-based Chemotherapy Resistance in Ovarian Cancer Tissues

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摘要 目的

探讨钙结合蛋白S100A4与卵巢癌铂类化疗耐药之间的关系。方法应用免疫组织化学法检测60例卵巢上皮性癌组织中S100A4的表达情况；采用Western blot和实时荧光定量PCR法检测不同顺铂化疗敏感度的卵巢癌细胞A2780及CP70中S100A4的差异表达，MTT法测定顺铂对细胞的半数抑制浓度(IC50)。结果(1）S100A4在卵巢癌组织中呈胞核表达、单纯胞质表达及核浆共同表达。铂类化疗耐药组中S100A4 阳性表达率为66.67%(16/24），高于敏感组33.33%(12/36）($P<0.05$）。(2）耐药株CP70中S100A4 mRNA和蛋白表达均显著高于敏感株A2780。(3）顺铂对A2780和CP70细胞的IC50分别为20.54 μmol/ml和56.23 μmol/ml。结论S100A4的高表达参与卵巢癌铂类化疗耐药过程。

关键词： 卵巢肿瘤 顺铂 S100A4 化疗耐药

Abstract： Objective

To investigate the correlation between S100 calcium-binding protein A4(S100A4）and cisplatin-based chemotherapy resistance in ovarian cancer.MethodsThe expression of S100A4 in 60 ovarian cancer tissues was identified by immunohistochemistry method.RT-PCR and Western blot were used to evaluate the S100A4 mRNA and protein level respectively in platinum sensitive A2780 cell line and platinum resistant CP70 cell line.MTT assay was performed to determine the 50% inhibitory concentration (IC50) to cisplatin in A2780 and CP70 cells.

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ResultsS100A4 was located in the cytoplasm and nucleus.The positive rate of S100A4 protein in platinum resistant cases was higher than that in patients sensitive to platinum chemotherapy.The expression of S100A4 mRNA and protein were significantly higher in CP70 cells than that in A2780 cells.The IC50 was 20.54 μmol/ml in A2780 cells and 56.23 μmol/ml in CP70 cells，respectively.ConclusionHigh S100A4 expression predicts cisplatin-based chemotherapy resistance in ovarian cancer.

Key words： Ovarian cancer Cisplatin S100A4 Chemotherapy resistance

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