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乳腺肿瘤专题研究

Topo IIα和TUBB3检测在乳腺癌新辅助化疗方案选择中的意义

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摘要：

目的：探讨乳腺癌组织中DNA拓扑异构酶IIα（Topo IIα）和β微管蛋白III（TUBB3）的表达与蒽环类和紫杉类药物新辅助化疗疗效的关系。方法：选取64例女性原发性乳腺癌患者，随机接受蒽环类方案（20例），紫杉类方案（20例）或蒽环类联合紫杉类方案（24例）的新辅助化疗，3~4周期后评价疗效。用免疫组化的方法检测化疗前患者穿刺组织标本中癌细胞Topo IIα和TUBB3的表达。结果：蒽环类方案的化疗有效率为50.00%，紫杉类方案为35.00%，联合方案为70.83%，但3种方案间的疗效差异无统计学意义（P=0.128）。接受蒽环类方案的Topo IIα表达阳性患者疗效优于阴性患者（P=0.023），而紫杉类方案疗效与Topo IIα的表达情况无关（P=0.642）；接受紫杉类方案的TUBB3阳性表达患者疗效较阴性者差，但差异未达统计学意义（P=0.057），Topo IIα和TUBB3共阳性表达患者对于蒽环类方案敏感，而在Topo IIα表达阳性和TUBB3表达阴性时，紫杉类方案的疗效较好（P=0.015）；联合方案疗效与Topo IIα及TUBB3的表达情况均无关（P>0.05）。结论：Topo IIα表达阳性乳腺癌患者在使用蒽环类药物化疗时能获得更好的化疗疗效，故其可能成为制定乳腺癌个体化化疗方案的预测指标之一。TUBB3是否可以作为制定乳腺癌个体化化疗方案的预测指标尚需要更大样本量的研究来验证。

关键词： 乳腺肿瘤/治疗；新辅助化疗；DNA拓扑异构酶类 II型；微管蛋白

Significance of Topo II&alpha|and TUBB3 determination in neoadjuvant chemotherapy regimen selection for breast cancer

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Abstract:

Objective: To investigate the relations of DNA topoisomerase II IIα (Topo IIα) and class III β tubulin (TUBB3) expressions in breast cancer tissue with the efficacy of anthracycline- and taxane-based neoadjuvant chemotherapy. Methods: Sixty-four women with primary breast cancer were enrolled, and they were randomly designated to receive anthracycline-based regimen (20 cases), taxane-based regimen (20 cases) or anthracycline plus taxane-based regimen (24 cases) respectively, and efficacy evaluation was conducted after 3-4 cycles. The expressions of Topo IIα and TUBB3 in the needle aspiration specimens from these patients before chemotherapy were detected by immunohistochemical staining. Results: The response rate for anthracycline-based, taxane-based and combination-based regimen was 50.00%, 35.00% and 70.83% respectively, but no statistical difference was found among the three regimens (P=0.128). Patients with positive Topo IIα expression had better response to anthracycline-based regimen than those with negative Topo IIα expression (P=0.023), while the response to taxane-based regimen was not associated with Topo IIα expression status of the patients (P=0.642); patients with positive TUBB3 expression showed poorer response to taxane-based regimen than those with negative TUBB3 expression, but the difference did not reach a statistical significance (P=0.057); patients with co-positive Topo IIα and TUBB3 expression were sensitive to anthracycline-based regimen, while those with positive Topo IIα expression and negative TUBB3 expression had better response to taxane-based regimen (P=0.015); the efficacy of combination-based regimen showed no relation with either Topo IIα or TUBB3 expression status (P>0.05). Conclusion: Breast cancer patients with positive Topo IIα expression may obtain better results with anthracycline-based chemotherapy, so it

may be used as a predictor for making a personalized treatment plan. However, whether TUBB3 can be used as a predictor for tailored chemotherapy still needs further investigation with larger sample size.

Keywords: Breast Neoplasms/therapy Neoadjuvant Chemotherapy DNA Topoisomerases, Type II Tubulin