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子宫内膜癌中EGFR蛋白的表达及EGFR基因突变 [点此下载全文](#)

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摘要:

目的: 研究表皮生长因子受体(epidermal growth factor receptor, EGFR)在子宫内膜癌组织中的表达及其基因突变情况。方法: 取江西省肿瘤医院及南昌大学第二附属医院2007年1月至2011年4月期间的子宫内膜石蜡包埋组织104例, 其中子宫内膜癌组织56例、非典型增生子宫内膜组织18例、正常子宫内膜组织30例, 利用免疫组化检测上述各组织中EGFR蛋白的表达, PCR法扩增子宫内膜癌或正常子宫内膜组织中EGFR基因外显子19、21序列并测序检测其突变情况。结果: 子宫内膜癌组织中EGFR的阳性表达率高于正常子宫内膜[73.2% (41/56) vs 30.0% (9/30),  $P < 0.01$ ]及非典型增生子宫内膜[73.2% (41/56) vs 44.4% (8/18),  $P < 0.05$ ]。进一步分析表明: G3级子宫内膜癌中EGFR的阳性表达率明显高于G1级[81.8% (9/11) vs 66.7% (12/18),  $P < 0.01$ ]及G2级[81.8% (9/11) vs 74.1% (20/27),  $P < 0.05$ ]。在肌层浸润 $>1/2$ 组中的阳性表达率也明显高于肌层浸润 $\leq 1/2$ 组[86.8% (33/38) vs 44.4% (8/18),  $P < 0.01$ ]。但EGFR的表达与子宫内膜癌的FIGO分期、有无淋巴结转移无明显相关性。发现1例子宫内膜癌组织中, EGFR基因外显子19有G2281A突变, 而外显子21无突变。结论: EGFR的阳性表达率与子宫内膜癌的组织学分级及肌层浸润深度有关, 子宫内膜癌组中存在EGFR外显子19的G2281A点突变。

关键词: [子宫内膜癌](#) [表皮生长因子受体](#) [基因突变](#)

EGFR protein expression and EGFR gene mutation in endometrial carcinoma [Download Fulltext](#)

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Fund Project:

Abstract:

Objective: To study the expression and gene mutation of epidermal growth factor receptor (EGFR) in endometrial carcinoma tissues. Methods: One hundred and four paraffin-embedded endometrial tissues were obtained from Tumor Hospital of Jiangxi Province and the Second Affiliated Hospital of Nanchang University from January 2007 to April 2011, including 56 endometrial carcinoma tissues, 18 endometrial atypical hyperplasia tissues, and 30 normal endometrial tissues. Immunohistochemistry was used to detect the expression of EGFR protein in the above tissues. Exon 19 and exon 21 of EGFR gene in endometrial carcinoma or normal endometrial tissues were amplified by PCR assay, and the mutations were detected by sequencing. Results: The positive expression rate of EGFR in the endometrial carcinoma tissues was higher than that in the normal endometrial tissues (73.2% [41/56] vs 30.0% [9/30],  $P < 0.01$ ) and that in atypical hyperplasia tissues (73.2% [41/56] vs 44.4% [8/18],  $P < 0.05$ ). Further analysis indicated that, the positive expression rate of EGFR in the G3 endometrial carcinoma tissues was significantly higher than that in G1 (81.8% [9/11] vs 66.7% [12/18],  $P < 0.01$ ) and G2 tissues (81.8% [9/11] vs 74.1% [20/27],  $P < 0.05$ ), and the positive expression rate of EGFR in the  $>1/2$  myometrial invasion group was higher than that in the  $\leq 1/2$  myometrial invasion group (86.8% [33/38] vs 44.4% [8/18],  $P < 0.01$ ). However, the expression of EGFR had no correlation with the FIGO stage and the lymph node metastasis of endometrial carcinoma. One endometrial carcinoma case showed the mutation of exon 19 (G2281A) in EGFR gene, whereas, no mutation was found in exon 21. Conclusion: The positive expression rate of EGFR in endometrial carcinoma is correlated with the histological grade and the infiltration depth of muscular layer, and some endometrial carcinoma tissues show the mutation of exon 19 (G2281A) in EGFR gene.

Keywords: [endometrial carcinoma](#) [epidermal growth factor receptor](#) [gene mutation](#)

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