

非小细胞肺癌患者围手术期血清VEGF水平变化与临床特征的关系

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Clinical Research of Perioperative Serum VEGF Level in Patients with Non-small Cell Lung Cancer

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摘要 目的: 研究非小细胞肺癌患者围手术期血清血管内皮生长因子的水平, 探讨其变化与临床特征之间的关系。

方法: 应用酶联免疫吸附试验 (enzyme linked immunosorbent assay, ELISA) 检测法, 分别监测21例非小细胞肺癌及12例肺良性病患者手术前、后1、7、14、21及28天血清VEGF的浓度, 30例健康志愿者确定血清VEGF正常水平。

结果: (1) NSCLC患者术前血清VEGF浓度(649.20 ng/L)显著高于肺良性疾病患者术前(140.70 ng/L)及健康人血清水平(94.40 ng/L) ($P = 0.000$); (2) 手术切除肿瘤后, NSCLC患者的血清VEGF水平比术前水平升高, 术后第14天出现峰值(1963.6 ng/L), 比术前血清水平

(649.20 ng/L)明显升高 ($P = 0.000$), 此后开始下降, 术后28天时NSCLC患者血清VEGF水平 (

958.4 ng/L)仍显著高于术前血清水平 ($P = 0.000$), 显著高于肺良性病患者此时的血清水平 ($P = 0.000$); (3) NSCLC患者术前血清VEGF水平与肿瘤大小和分化程度相关 ($P < 0.05$),

NSCLC患者围手术期血清VEGF动态变化与肿瘤大小、淋巴结转移及病理分期相关 ($P < 0.05$)。

结论: 非小细胞肺癌患者血清VEGF的术前水平显著高于肺良性病患者及健康人。围手术期血清VEGF水平显著升高; NSCLC患者术前血清VEGF水平与肿瘤大小和分化程度相关, NSCLC患者围手术期血清VEGF动态变化与肿瘤大小、淋巴结转移及病理分期相关。

关键词: 血管内皮生长因子 非小细胞肺癌 酶联免疫吸附试验 围手术期

Abstract: Objective: To study the perioperative dynamic changes of serum VEGF level in non-small cell lung cancer (NSCLC) patients

who undergo surgery.

Methods: Serum VEGF level was detected in 21 patients with NSCLC who were undergoing surgery by ELISA (enzyme linked immunosorbent assay) method before operation and on postoperative day 1, 7, 14, 21, 28. At the same time 12 patients with pulmonary benign diseases treated by surgery were studied as the control. Thirty healthy volunteers served to define normal VEGF.

Results: (1) Preoperative serum VEGF level(649.20 ng/L) in the group of patients with NSCLC was significantly higher compared with the benign or healthy group (respectively: 140.70 ng/L and 94.40 ng/L, $P = 0.000$). (2) Serum VEGF level was elevated after surgery and the peak was observed on postoperative day +14 (1963.6

ng/L) in NSCLC, the peak was significantly higher than the preoperative level

(649.20 ng/L) ($P = 0.000$). Then the levels dropped, but it was still

significantly higher than the preoperative level ($P = 0.000$) and the level of the benign disease at the same time ($P = 0.000$). (3) Tumor size and the differentiation were related to preoperative serum VEGF level ($P < 0.05$). Tumor size, TNM stages and lymph node metastasis correlated with the change of serum VEGF ($P < 0.05$).

Conclusion: Conclusions Perioperative serum VEGF level was significantly elevated in patients with NSCLC. Tumor

size and the differentiation correlated with preoperative serum VEGF level. Tumor size, TNM stages and lymph node metastasis related to the change of serum VEGF.

Key words: **Vascular endothelial growth factor** **Non-small cell lung cancer** **Enzyme linked immunosorbent assay**

Perioperative

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