

The Quantitative Analysis of the Oxidants/Antioxidants in the Tissues of Lung Cancer Patients

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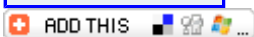
摘要

Background and objective The relationship between antioxidants and tumor was gradually paid attention. The changes of activities and the levels of expression mRNA and protein of oxidants and antioxidants, were evaluated in 113 lung tumor and 64 tumor-free lung tissues collected between the years 2006 and 2007 from 113 individuals with surgically resectable lung cancer in order to understand the mechanism of the onset and development of lung cancer. **Methods** The activities of TSOD, MnSOD, CuZnSOD, GPx, H₂O₂ and MDA were determined by chromometry. MnSOD, CuZnSOD mRNA and protein expression levels were evaluated by Reverse transcription polymerase chain reaction and Western Blot analysis in tumor tissues, as well as corresponding control tissues. **Results** Comparing with the levels of these indexes in the tumor-free tissues, the activities of TSOD, CuZnSOD, GPx were higher, H₂O₂ and MDA were lower in the tumor tissues ($P < 0.05$ or $P < 0.01$). Comparing with the group of the squamous cell carcinoma, H₂O₂, MDA were higher in the tumor tissues of the group of adenocarcinoma ($P < 0.05$ or $P < 0.01$). There was less MnSOD mRNA and protein in tumor than in tumor-free lung. The contents of CuZnSOD mRNA and protein in tumor were less than those in tumor-free lung tissue ($P < 0.01$). **Conclusion** The imbalance between the oxidants and antioxidants exists in the tissues of patients with lung cancer. The imbalance may have some relationship with the onset and development of lung cancer.






关键词

Lung neoplasms; Antioxidants; Oxidants



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