

Research on Relationships of Gastric Cancer with Serum Trace Elements, Helicobacter Pylori and COX-2 in Gastric Tissue

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The relationships of gastric cancer with serum trace elements, helicobacter pylori (HP) and COX-2 in gastric tissue were investigated. We took 50 blood samples from the gastric cancer patients in Ninghe region (the gastric cancer group), and 50 blood samples from healthy volunteers (control group) and detected the level of trace elements, the rate of HP infection, and the expression of COX-2 in gastric tissue. The results showed the levies of Cu/Zn, Fe in the serum of the gastric cancer group were higher than those of the control group respectively ($P < 0.05$, 0.01), and the levels of Zn, Mn were lower than those of the control group respectively ($P < 0.05$, 0.01). The data on Zn were submitted to multi-variate non-conditional logistic analysis. The rate of HP infection and the positive expression of COX-2 were 88% and 78% respectively in the gastric cancer group, 42.0% and 0 in the control group ($P < 0.01$). These findings suggest that the decrease of Zn in serum may be a precancerous factor of gastric cancer development which induces HP infection and the higher expression of COX-2 and hence may lead to the development of gastric cancer. Detecting the trace elements could conduce to the diagnosis of gastric cancer. Regulating the level of trace element in the patient can be an effective chemoprophylaxis for gastric cancer.

Keywords : Gastric Cancer, Trace Elements, H. Pylori COX-2