

## Effect of nitric oxide on gastric carcinoma metastasis

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### Abstract

**AIM:** To observe the effect of nitric oxide in peripheral blood during the process of gastric carcinoma metastasis.

**METHODS:** Twenty-four patients including 21 males and 3 females suffered from gastric carcinoma. The average age was 56 (from 44 to 68). They were divided into two groups: carcinoma group (without metastasis;  $n = 8$ ) and metastasis group (with local or/and distance metastasis;  $n = 16$ ). Their serum were collected pre-operation for detecting the metabolite of nitric oxide-nitrite. Forty volunteers as the normal control group were venupunctured to detect the concentration of nitrite simultaneously. The nitric oxide was measured by a method

of cadmium reduction through detecting the concentration of nitrite. The values were expressed as  $\bar{x} \pm s$ . The data were analyzed with analysis of variance and  $q$  test. Statistical significance was defined as  $P < 0.05$ .

**RESULTS:** The average nitric oxide concentration of metastasis group was  $50.62 \pm 7.8 \mu\text{mol/L}$ , the concentration of gastric carcinoma group was  $70.76 \pm 9.7 \mu\text{mol/L}$ , and that of the normal control group was  $80.78 \pm 14.50 \mu\text{mol/L}$ . The nitric oxide concentration of metastasis and carcinoma groups were decreased significantly compared with the normal control ( $P < 0.01$ ,  $P < 0.05$ ). The difference between metastasis and carcinoma group was significant ( $P < 0.05$ ).

**CONCLUSION:** The concentration of nitric oxide may have an inhibited effect on the process of gastric carcinoma metastasis, and the decrease of nitric oxide concentration would be harmful to the treatment of gastric carcinoma.

**Key words:** Stomach neoplasms; Nitric oxide; Neoplasm metastasis

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