

**STUDY ON RELATIONSHIP BETWEEN CIRCULATING MYOSTATIN AND
GASTRIC CARCINOMA ASSOCIATED CACHEXIA**

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Background : To observe the changes of serum myostatin (MSTN) level in patients with gastric carcinoma-associated cachexia, and to investigate the relationship between MSTN and tumor necrosis factor (TNF- α) preliminarily.

Methods: Eighty cases of patients with gastric cancer were divided into two groups: gastric carcinoma-associated cachexia group (GCC, PG-SGA stage C) and non gastric carcinoma-associated cachexia group (GCNC, PG-SGA stage A+B) according to the Scored Patient-Generated Subjective Global Assessment(PG-SGA). The serum MSTN and TNF- α concentration were measured by ELISA and related parameters(height, weight, albumin, hemoglobin, C-reactive protein) were collected before operation. Eighty healthy adults were chosen as the control group, the same parameters as the above were measured and collected.

Results: 1. The serum MSTN in the GCC group ($1.36\pm0.50\mu\text{g/L}$) was significantly higher than that in the GCNC group($0.91\pm0.49\mu\text{g/L}$). The serum MSTN of GCNC group was significantly higher than that of the control group($0.70\pm0.37\mu\text{g/L}$). 2. Serum MSTN concentration showed significantly negative correlation with weight($r=-0.47$, $p=0.00$), BMI($r=-0.38$, $p=0.00$) in control group, but has no relationship with other nutrition parameters. In GCC group and GCNC group the serum MSTN level shows no relationship with the nutritional parameters. 3. Serum MSTN levels have no relationship with that of TNF- α in GCC group, GCNC group and control group.

Conclusions: The level of serum MSTN was elevated in patients with gastric carcinoma-associated cachexia. There is no correlation between the serum level of MSTN with that of TNF- α .

Key words: Myostatin; Cachexia; PG-SGA; TNF- α ; Gastric Carcinoma