ELEVATED KIAA0101 IN PERIPHERAL BLOOD MONONUCLEAR CELLS CONTRIBUTES TO HIGHER MALIGNANT DEGREE IN GASTRIC CANCER

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Background: Recently, we have found KIAA0101 is increased in human gastric cancer and a marker of the recurrence. Previous studies mainly focused on the expression of KIAA0101 in tumor cells. Our study is to investigate the expression of KIAA0101 in peripheral blood mononuclear cells (PBMC) of gastric cancer, in order to develop a non-invasive diagnostic method and estimate the prognostic value of KIAA0101 for future clinical applications.

Methods: We used immunohistochemistry to detect the distribution of KIAA0101 in the PBMC. KIAA0101 mRNA expression levels in PBMC were measured by real-time PCR from 66 patients and 48 normal controls.

Results: 1. Immunohistochemistry showed that the distribution of KIAA0101 in PBMC is mainly in the nucleus. 2. KIAA0101 mRNA in PBMC was overexpressed in 47 (71.2%) patients with gastric cancer, and only 7 (14.5%) in normal controls. There were statistically significant differences between the groups (P < 0.0001). 3. KIAA0101 mRNA expression in PBMC correlated with tumor histologic grade (P < 0.05), depth of tumor invasion (P < 0.05), and TNM tumor stages (P < 0.05); there was no obvious correlation with age, gender and lymph node metastasis status.

Conclusion: Our study suggested that KIAA0101 gene is elevated in PBMC from patients with gastric cancer. And the expression of KIAA0101 is correlated with tumor histologic grade, depth of tumor invasion and TNM tumor stages. We can indicate that KIAA0101 mRNA overexpression in PBMC from patients with gastric cancer could predict a higher malignant degree and hence poor prognosis.