Th17/Treg cells imbalance in peripheral blood mononuclear cells of patients might be contributed to the gastric cancers progression

Zhaoliang Su, Shengjun Wang, Huaxi Xu
Department of Immunology, Institute of Clinical Laboratory Medicine, Jiangsu University, China

To analyze the expression of Th17/Treg cells in gastric cancers, we detected the expression levels of transcription factors and associated cytokines of Th17 and Treg cells in the peripheral blood mononuclear cells (PBMC) of patients with gastric cancer, and explored the possible pathological mechanism of these Th17/Treg cells in gastric cancer progression. The mRNA levels of RORγt, Foxp3 in PBMC were determined by quantitative real-time PCR (RT-qPCR) from 57 patients with gastric cancer, 31 patients with benign gastric illness and 40 healthy people. The concentration of IL-17, IL-23, TGF-β, IL-10 in plasma were detected by enzyme linked immunosorbent assay (ELISA).

1. Compared with healthy volunteers, patients with gastric cancer appeared higher levels of RORγt and Foxp3 in PBMC (p<0.05);
2. The ratio of FoxP3/RORγt in gastric cancer group was higher than that in volunteer group and benign gastric illness group (p<0.05).
3. The ratio of FoxP3/RORγt was higher in advanced disease than early disease (p<0.05).
4. The IL-17, IL-23, TGF-β and IL-10 were higher in patients with gastric cancer than that in healthy volunteers (p<0.05). In addition, The TGF-β and IL-10 were significant increased in advanced disease group than that in early group (p<0.05), but IL-17 and IL-23 did not obviously change between two groups (p>0.05).

There were higher level of Th17 and Treg cells in gastric cancer patients and it also shown a persistent Treg cell predominant and a Th17 reduced tendency in advanced disease. The variety of Th17/Treg in PBMC in the development of gastric cancer may related to the regulations of cytokine in immune internal environment.

Biography
Zhaoliang Su has completed his Ph.D at the age of 32 years from Jiangsu University and postdoctoral studies from The western university of ontario. He has published more than 15 papers in reputed journals. And he had obtained 4 grants from the Chinese government.