Study of different TCM syndromes in the same disease and same TCM syndrome for different diseases in post-operative liver and colorectal cancer underlying the multiplex biometric immunoassay technology

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Aim & Method: To study the significant expression of cytokines of different traditional Chinese medicine (TCM) syndromes in the same disease and same TCM Syndrome for different diseases in postoperative liver (PLC) and colorectal cancer (PCC).

Methods: Plasma samples of patients with PLC and PCC were collected. The different expression profiles of 45 cytokines were detected by multiplex biometric immunoassay. TGF-β1 and significant expressed cytokines were verified with ELISA. ROC curve for TCM syndromes diagnosis and biological pathways were analyzed.

Results: There were different expression profiles of cytokines in postoperative liver and colorectal cancer with different TCM syndromes. Six cytokines including IP-10, RANTES, MIP-1β, IL-18, IL-1RA and IFN-γ were found significantly expressed in PLC patients with different TCM syndromes (P<0.05), and five cytokines including RANTES, BDNF, PDGF-BB, IL-9 and FGF-2 were found significantly expressed in PCC patients with different TCM syndromes(P<0.05). Compared with absence of symptoms, RANTES in the liver and kidney Yin deficiency syndrome (LKDYDS) and TGF-β1 in the spleen deficiency syndrome (SDS) were expressed approximately (P>0.05), while no common cytokines were found in both PLC and PCC with the Damp-heat syndrome (DHS). ROC analysis used IP-10, RANTES, MIP-1β, BDNF, BDGF-BB, TGF-β1 combination shows that AUC was 0.837 in LKDYDS, 0.871 in SDS and 0.833 in DHS and 0.936 in NS, respectively. Biological pathway analysis shows that Cytokine-cytokine receptor interaction pathway, Cytosolic DNA-sensing pathway, Influenza A pathway and Toll-like receptor signaling pathway were related to PLC with LKDYDS, SDS, DHS and NS, and MAPK signaling pathway, Cytokine-cytokine receptor interaction pathway and Melanoma pathway were related to PCC with LKDYDS, SDS, DHS and NS.

Conclusion: There were specific cytokines in LKDYDS, SDS and DHS, and the alternations of the cytokines may involve in the formation of the TCM syndromes in PLC and PCC.

Biography
Shi-Bing Su, Medicine Doctor (PhD in medicine), is a Professor of Integrative Medicine and Traditional Chinese Medicine (TCM), Director of the center for complex systems, Shanghai University of TCM, leading scientist of TCM System Science Discipline, Distinguished Researcher of Shanghai TCM Internal Medicine E-institute, Visiting Professor of Nanjing University of TCM, Guest Professor of Henan college of TCM, Academic Journal editor for Integrative Medicine International, Journal of Integrative Medicine, Journal of TCM Science, etc. He got his B Sc in TCM at Nanjing University of TCM, M Sc in Pharmacy and Medicine Doctor degree in Gastroenterology at Cancer Institute, Kanazawa University, and Docent at China Pharmaceutical University. Currently his research focus on TCM syndrome classification-based treatment in clinical and basic studies applied by system biology. He has published 160 papers and 10 books in academic Journals.

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