

Effects of Traditional Chinese Medicine on Restoring the immune balance of mild-to-moderate Patients with new coronavirus

Sijie Chen^{1,2}, Hongmei Li¹, Zihan Jiang³, Jingtian Liang², Ao Zhou²

Abstract:

OBJECTIVE: Coronavirus disease 2019 (COVID-19) which brings the epidemic situation to the public has spread rapidly and produce multiple variations. At present, Western medicine still lacks the specific medicine or vaccines for coronavirus. However, amount of evidence shows that traditional Chinese medicine (TCM) has advantages in releasing the symptoms of mild-to-moderate COVID patients. Those treatments are not only improving the course of the primary disease but also curb progress to severe pneumonia or acute respiratory distress syndrome. Therefore, taking TCM intervention or combined treatments appropriately to prevent worsening illness is of vital significance. This study mainly focuses on the data analysis on the effects of TCM in restoring the immune balance of COVID patients. By collecting clinical data from mild to moderate patients, we expected to figure out if TCM only plays the role of curbing inflammation or having a two-way influence in balancing the immune microenvironment.

METHODS: Seven digital databases including PubMed, EMBASE, Cochrane Library, China National Knowledge Infrastructure, China Science and Technology Journal Database (VIP), Wanfang Database, and China Biology Medicine were searched from December 2019 to August 2022 nothingness of language restrictions. The studies retrieved from the database were selected and the data extracted to assess the methodological quality of the included randomized controlled trials (RCTs). Statistical analysis was completed. Pulmonary computed tomography, clinical cure rate, rate of conversion to severe cases, length of hospital stay, and scores of TCM syndrome were defined as the primary outcomes, the secondary outcomes were white blood cell count, lymphocyte (LYM) count, and C-reactive protein (CRP). This study was registered with PROSPERO (CRD42022341482).

RESULTS: Nine eligible RCTs including 1159 participants were included in this meta-analysis. Compared with Western medicine treatment alone, our meta-analyses found that traditional Chinese combined Western medicine treatment has a higher clinical cure rate, better absorption of lung inflammation, and significantly shorter hospital stay. In terms of inflammatory factors, TCM can significantly reduce the CRP content compared with Western medicine methods, but the leukocyte and LYM content was not significantly different between the two treatments. In some research, TCM even has a trend accelerating the inflammation process on some specific stages of the disease.

CONCLUSION: Chinese herbal medicine combined with conventional therapy is significantly effective and invulnerable in the treatment of mild-to-moderate COVID-19. In terms of control inflammation, TCM does not only block the disease onset by simply inhibiting inflammation but balancing the human environment through bidirectional regulation of inflammatory cells. However, considering of the lack of research into how TCM could activate the natural immune response, the discussion of the mechanism cannot be stretched, more high-quality RCTs are still needed in the future.

Keywords:

Coronavirus, immune balance, mild to moderate patients, traditional Chinese medicine