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Therapeutic effects and safety of oral Chinese patent medicine for COVID-19: A rapid systematic review and meta-analysis of randomized controlled trials

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Introduction: Chinese patent medicine (CPM) is an indispensable part of traditional Chinese medicine. Coronavirus Disease 2019 (COVID-19) manifests as an acute respiratory infectious disease. This systematic review aimed to evaluate the therapeutic effects and safety of oral CPM for COVID-19.

Methods: We included randomized controlled trials (RCTs) that tested oral CPM for the treatment of COVID-19 identified from publications in CNKI, Wanfang, VIP, Web of Science, SinoMed, PubMed, Embase, BioRxiv, MedRxiv and arXiv before November 2nd, 2020. The risk of bias for each trial was assessed using the Cochrane Risk of Bias Tool 2.0. RevMan 5.4 software was used for data analyses. The certainty of the evidence was assessed using the online GRADEpro tool.

Results: Seven RCTs including 1079 participants were identified. The overall bias was assessed as “some concerns” for all included trials. Oral CPM investigated were: Lianhua Qingwen capsule/granules (连花清瘟胶囊/颗粒, LHQW), Jinhua Qinggan granules (金银花颗粒, JHQG), Huoxiang Zhengqi dripping pills (藿香正气滴丸, HXZQ), Toujie Quwen granules (透解祛瘟颗粒, TJQW) and Lianhua Qingke granules (连花清咳颗粒, LHQK). Compared with conventional western therapy alone for people with COVID-19: regarding the main outcomes, the results showed that oral CPM combined with conventional western therapy improved cure rate (RR = 1.20, 95% CI 1.04 to 1.38, involving LHQW and TJQW), reduced aggregation rate (RR = 0.50, 95% CI 0.29 to 0.85, involving LHQW, JHQG, LHQK and TJQW); with regard to additional outcomes, the results showed that add-on oral CPM shortened the duration of fever, cough and fatigue, improved the recovery rate of cough and fatigue, and increased the improvement and recovery rate of chest CT manifestations. There were some differences in therapeutic effects among various CPMs for the same COVID-19 outcome. The use of TJQW and LHQG appeared not to increase the risk of adverse events, but JHQG may cause mild diarrhea.

Conclusions: Low-certainty or very low-certainty evidence demonstrated that oral CPM may have add-on potential therapeutic effects for patients with non-serious COVID-19. There are some differences in therapeutic effects between different oral CPMs for the same outcome of COVID-19. The use of TJQW and LHQG probably does not increase the risk of adverse events, but JHQG may cause mild diarrhea in patients. The conclusion of this review needs to be further confirmed by well-designed clinical trials with adequate sample sizes.

Keywords: Coronavirus Disease 2019; COVID-19; Chinese patent medicine; Chinese herbal medicine; Systematic review; Meta-analysis

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Chinese Herbal Medicine Used With or Without Conventional Western Therapy for COVID-19: an evidence review of clinical studies

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Role of Nutrients for COVID-19 recovery: an integrative approach

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Introduction: Many patients (“long-haulers”) suffer lingering illness following COVID-19. The aim of this presentation is to evaluate the evidence of nutrient deficiencies affecting immune function and chronic symptoms from covid19 infection in a subgroup of patients. We will discuss the potential benefit of supplementing with multi-nutrients as an integrative approach to reducing long-hauler symptoms.

Methods: A narrative review followed a search of Medline/PubMed, CINAHL, Google Scholar for studies published between January 2000 and March 2021, using key terms “coronavirus”, “COVID-19”, “immune system”, “inflammation”, “microbiome”, “oxidative stress”, “mitochondrial function”, “micronutrients”, “vitamin”, “minerals”, and “antioxidants”. Six reviews were selected which examined on the role of nutrients in immune and neurological function, including inflammatory processes, microbiome homeostasis, and mitochondrial function.

Results: Symptoms of long-haulers may be similar to myalgic encephalomyelitis/chronic fatigue syndrome associated with mitochondrial dysfunction due to oxidative stress. Similar findings of chronic inflammation and microbiome dysbiosis associated with mood disorders also suggest the association between nutrient deficiencies and immune-neurological functions. Nutrients required for optimal immune function included: antioxidants such as CoQ10 is required for mitochondrial function and is depleted quickly during acute immune response. Vitamins C and E and selenium also have antioxidant properties that can decrease pro-inflammatory cytokines and increase leukocyte and NK cell function. The B vitamins are involved in decrease pro-inflammatory cytokines and increase NK cell activities. Similarly, these nutrients are required for optimal neurological functioning in the CNS.

Conclusion: Initial evidence suggests chronic inflammatory processes in the CNS may contribute to the symptoms of covid-19 long-haulers. Given the complementary roles of different nutrient in immune response and CNS pathways, integrating multiple nutrients as treatment for long-haulers warrants further study.

Keywords: post-covid syndrome, long hauler, micronutrient treatment; narrative review

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