

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active. CI=1.04–3.02, as compared to 18–35 years). Respondents who resided in districts with a moderate to high number of confirmed COVID-19 cases (OR=1.60, 95% CI=1.07–2.42) and had a higher level of risk perception (OR=1.04, 95% CI=1.01–1.07) were also more likely to use TCIM during the pandemic.

Conclusion: TCIM was used commonly in Hong Kong during the COVID-19 pandemic, although the frequency of use was lower than that reported before the pandemic. While vaccination, social distancing and basic hygiene remain the mainstay of controlling the pandemic, health authorities should also proactively provide evidence-based information to the public regarding the effectiveness and safe use of TCIM for COVID-19 prevention and treatment.

Keywords: COVID-19, Complementary Medicine, Integrative Medicine, Traditional Medicine, Cross-sectional Survey

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Role of Nutritents 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 mitochondria 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 immunoneurological 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 proinflammatory 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 longhaulers. 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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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 is 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 (金花清感颗 粒, JHQG), Huoxiang Zhengqidripping 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 aggravation 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 Shi-Bing Liang ^{1,*}, Ying-Ying Zhang ¹, Chen Shen ¹, Chang-Hao Liang ¹, Bao-Yong Lai ², Ning Dai ¹, Yu-Qi Li ¹, Zi-Yu Tian ¹, Xiao-Wen Zhang ¹, Yue Jiang ¹, Min Xiong ¹, Ya-Peng Zhang ¹, Ying Zhang ¹, Nicola Robinson ³, Jian-Ping Liu ³

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Introduction: Coronavirus Disease 2019 (COVID-19) is an acute respiratory infectious disease. At present, there is no specific and effective therapy for the treatment and prevention of this disease. Traditional Chinese medicine (TCM) has accumulated thousands of years of experience on the use of Chinese herbal medicine (CHM) to prevent and treat infectious diseases. The aim of this study was to present the evidence on the therapeutic effects and safety of Chinese herbal medicine (CHM) used with or without conventional western therapy for COVID-19.

Methods: Clinical studies on the therapeutic effects and safety of CHM for COVID-19 were included. We summarized the general characteristics of included studies, evaluated methodological quality of randomized controlled trials (RCTs) using the Cochrane risk of bias tool, analyzed the use of CHM, used Revman 5.4 software to present the risk ratio (RR) or mean difference (MD) and their 95% confidence interval (CI) to estimate the therapeutic effects and safety of CHM.

Results: A total of 58 clinical studies were identified including RCTs (17.24%, 10), non-randomized controlled trials (1.72%, 1), retrospective studies with a control group (18.97%, 11), case-series (20.69%, 12) and case-reports (41.38%, 24). Fig.1 shows the flow diagram for the searching and screening of published articles. No RCTs of high methodological quality were identified. The most frequently tested oral Chinese patent medicine, Chinese herbal medicine injection or prescribed herbal decoction were: Lianhua Qingwen granule/capsule, Xuebijing injection and Maxing Shigan Tang. Table 1 lists the CHM used at least twice. In terms of aggravation rate, pooled analyses showed that there were statistical differences between the intervention group and the comparator group (RR 0.42, 95% CI 0.21 to 0.82, six RCTs; RR 0.38, 95% CI 0.23 to 0.64, five retrospective studies with a control group), that is, CHM plus conventional western therapy appeared better than conventional western therapy alone in reducing aggravation rate. In addition, compared with conventional western therapy, CHM plus conventional western therapy had potential advantages in increasing the recovery rate and shortening the duration of fever, cough and fatigue, improving the negative conversion rate of nucleic acid test, and increasing the improvement rate of chest CT manifestations and shortening the time from receiving the treatment to the beginning of chest CT manifestations improvement. For adverse events, pooled data showed that there were no statistical differences between the CHM and the control groups.

Conclusion: Current low certainty evidence suggests that there may be a tendency that CHM plus conventional western therapy is superior to conventional western therapy alone. The use of CHM did not increase the risk of adverse events.

Keywords: traditional Chinese medicine, Chinese herbal medicine, novel coronavirus pneumonia, coronavirus disease 2019, COVID-19, SARS-CoV-2, review, clinical study

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An exploration into the impact of COVID-19 on mental wellbeing and the self-care strategies employed Anne Majumdar *, Antony Laban, Luana Baptista, Yuntao Wang, Khushboo Patel

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Introduction: It has been widely reported that the mental well-being has been adversely affected by the COVID-19 pandemic and the imposed social isolation restrictions. It is essential to investigate, comprehend and acknowledge the profound influence Covid-19 has had on anxiety levels and explore approaches that people have used to manage this in order to inform future interventions and promote self-care behaviours to improve mental wellbeing. The aim of this study was to explore the anxiety experienced by adults during the COVID-19 pandemic and how they manage it.

Methods: A specifically designed questionnaire containing open and closed questions was disseminated using social media in 4 countries including the UK. Descriptive and inferential statistics were used and data collected from the free-text questions were analysed using the thematic analysis. Ethical approval was obtained from St Marys University Research Ethics Committee.

Results: To date n = 382 adult respondents aged 18 plus completed the survey. Analysis is on-going, full results will be available by the symposium date. Preliminary analysis indicated that the most common self-care behaviours used for anxiety self-management pre and during the pandemic were walks, virtual family/social peer support, cooking and aerobic exercise. Additionally, it was apparent that both a lack of a sustained reciprocation of ongoing family/social support was a key predictor for the proclivity of anxiety-inducing thoughts to be experienced and reduced family/social support led to negative thought processes and feelings such as isolation, loneliness and uncertainty about the future. Individuals who continually engaged in activity generally reported more positive mood states irrespective of the social isolation environment.

Conclusion: This study highlights the impact of the COVID-19 pandemic on mental wellbeing and stresses the significance of ongoing peer support during social isolation. Facilitating self-care and opportunity for peer support may be an effective strategy for interventions to improve mental wellbeing during times of social isolation.

Keywords: COVID-19; mental wellbeing; survey; self-care; social isolation

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Complementary Medicine Strategies during the COVID-19 Pandemic - a Cross-Sectional study

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Introduction: Complementary and Integrative Medicine (CIM) may provide an opportunity for health preventive or supportive selftreatment regarding COVID-19 infections. The study aims to explore self-help and prevention strategies and the emotional state during the pandemic in people who are familiar with CIM.

Methods: We conducted an explorative cross-sectional study with an anonymous 41-item online-survey in German language among adults familiar to CIM (e.g. through a membership in a CIM association) from September 2020 to February 2021. A selection of 17 popular CIM methods was presented to capture self-help and prevention strategies used by the respondents and to assess the expected success of utilized methods.