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1. Discussion on the Prevention and Treatment of Infectious Diseases under the Guidance of Ancient Theories of Traditional Chinese Medicine

Keywords: coronavirus disease 2019; SARS-CoV-2; therapy of traditional Chinese medicine; infectious diseases; Yunqi; data mining;

CHEN Xiaona;FANG Hong;ZHANG Tiansong et al. *Medicine & Public Health*. 10.16305/j.1007-1334.2020.06.096

Abstract: Based on the study of the understanding of epidemic disease in traditional Chinese medicine(TCM), the influence of Yunqi theory on epidemic situation and the characteristic of prescriptions and medicines for the prevention and treatment of epidemic disease in TCM, this paper discusses the practical significance of ancient Chinese anti epidemic theory and its clinical guiding value for COVID-19 prevention and treatment. It is believed that combined with the theory of Yunqi, the cause of COVID-19 is that the water and fire are mutually controlled at the end of 2019. It is estimated that the large-scale spread of COVID-19 will be controlled in March 2020 and eliminated in June to August. The high-frequency TCM for the prevention and

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treatment of COVID-19 is mainly aromatic resuscitation medicine, heat clearing and detoxification medicine, wind dispelling and deficiency tonifying medicine, but the way of formulation is different due to the different stages of the disease.

2. Preliminary Study on the Effective Components and Mechanism of Huoxiang Zhengqi Decoction in Inhibiting the Replication of Novel Coronavirus

Keywords: SARS-COV-2; COVID-19; molecular docking; Network Pharmacology; Huoxiang Zhengqi Decoction; antiviral; PI3K-Akt signaling pathway; Du Haitao; Wang Ping; Ma Qingyun; et al . *Medicine & Public Health*.

10.11842/wst.20200221002.

Abstract: Objective: The active components of Huo xiang Zheng qi Decoction were collected, the effective components and mechanism of novel coronavirus pneumonia(COVID-19) were investigated through molecular docking and network pharmacology. Method: Based on the calculation method of ligand-protein interaction, using remdesivir as a control drug to explore the potential anti-COVID-19 natural drug components of Huo xiang Zheng qi Decoction. The better docking components were selected to predict the pharmacological mechanism, and the pharmacological mechanism was preliminarily explored. Results: In this study, we screened 5 small molecular components with stronger binding ability to 3 CLpro than that of remdesivir. Network pharmacology initially predicted that the antiviral pathway might affect viral replication through the Network pharmacology preliminarily predicted that the antiviral pathway might be through the PI3 K-Akt signaling pathway to affect viral replication. Conclusion: The components C1-C5 bind well to 3 CLpro, and it is speculated that it may be a potential inhibitor of 3 CLpro, which is worthy of further development and research and helps to provide theoretical guidance and experimental basis for the development of natural antiviral drugs.

3. Medication Rules and Medication Monitoring of 875 Cases of Novel Coronavirus Pneumonia Treated by traditional Chinese Medicine

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Keywords: coronavirus disease 2019(COVID-19); 2019-nCoV; traditional Chinese medicine; medication rule; medication monitoring; Gan lu Xiao du Dan; Qing jin Jiang huo Tang;

CHEN Ling; LIU Fang; WANG Xiao- xia; et al. *Chinese Journal of Experimental Traditional Medical Formulae*. 10.13422/j.cnki.syfjx.20201412

Abstract: Objective: This paper analysed the prescriptions of traditional Chinese medicine (TCM) for all patients diagnosed with Novel Coronavirus Pneumonia (coronavirus disease 2019, COVID-19) in Wuhan third hospital, analysed the medication rules of the prescription, summarized the characteristics and thoughts of medication, and discussed the contents of TCM medication monitoring. Method: Use the data analysis software Excel 2007 and SQL server 2017 to perform statistical analysis for all inpatients in our hospital from January 25, 2020 to March 18, 2020 who were treated by the prescriptions of TCM. The usage quantity, frequency, average dosage and dosage range of TCM were counted and compared with the dosage stipulated in the 2015 edition of Chinese pharmacopoeia. Result: In this study, a total of 875 patients were included in the treatment prescription, involving 233 TCMs, and 20 high-frequency herbs were obtained, which were mainly used to dissolve phlegm, relieve cough and asthma, and tonify body. In the analysis of the characteristics of TCM, it is mainly composed of plain drugs, followed by cold drugs and warm drugs. The main taste of medicine is bitter, followed by spicy and sweet. The main meridians were the lung meridians, followed by the spleen and stomach meridians. By using association rule analysis and complex network analysis, it was found that the correlation degree of Artemisiae Scopariae Herba, Amomi Fructus Rotundus, Akebiae Caulis, Talcum and Fritillariae Cirrhosae Bulbus was very high, which could treat symptoms such as fever, cough, sputum, thirst, chest tightness and abdominal distension after COVID-19 infection. Conclusion: In this study, it was found that the core prescription for the treatment of COVID-19 in our hospital was the addition and reduction of clearing damp agent, modified Gan lu Xiao du Dan, and

the reduction of expectorant modified Qing jin Jiang huo Tang, all the drugs were excess used than pharmacopoeia prescribed dosage. As a clinical Chinese pharmacist, we should distinguish the syndrome types according to the symptoms of the patients, and medication monitoring should be conducted from the aspects of usage and dosage of specific medication, processing product selection, compatibility, patient education, etc.

4. A Case Report of Curing COVID-2019 with Early Intervention of Traditional Chinese Medicine

Keywords: COVID-2019; Traditional Chinese medicine prevention and treatment; Treating before disease attack;

XU Jian cheng, PAN Hongtu, LING Zhou. *Clinical Journal of Traditional Chinese Medicine.*

Abstract: The process of TCM diagnosis and treatment of one confirmed case of COVID-2019 returned from Wuhan was recorded, analysed and summarized. It is believed that active intervention, treatment based on syndrome differentiation and late care of applying traditional Chinese medicine have significant effects on COVID-2019. Traditional Chinese medicine can significantly improve the respiratory tract and systemic symptoms of patients, reduce the adverse reactions of antiviral western medicine, promote the absorption of pulmonary inflammation, and improve the prognosis of patients.

5. At the Core of Rational Drug Use of Analysis on Entry Points and the Necessity of Traditional Chinese Clinical Pharmacists Participating in the Treatment of NCP

Keywords: Traditional Chinese clinical pharmacists; traditional Chinese medicine; 2019-nCoV; novel coronavirus pneumonia; NCP;

DuanHong Fu; RongChun Lei; Cui Ying; *Modernization of Traditional Chinese Medicine and Materia Medica-World Science and Technology.*

Abstract: Since the outbreak of novel coronavirus pneumonia(NCP) in Wuhan, the country has issued the "Pneumonitis Diagnosis and Treatment Program for novel coronavirus pneumonia" with the fastest response speed, and clearly instructs the establishment of a sound Chinese and Western medicine collaboration mechanism in the prevention and treatment of novel coronavirus pneumonia, so that Chinese medicine can be established as soon as possible. Get involved as soon as possible and actively play the role of Chinese medicine. From the perspective of clinical medicine of traditional Chinese medicine, this study takes the prevention and diagnosis of novel coronavirus pneumonia released by the country and provinces as the starting point, analyses the feasibility and necessity of Traditional Chinese medicine clinical pharmacists to participate in the prevention and treatment of novel coronavirus pneumonia, and proposes the clinical practice of traditional Chinese medicine. The point of view of pharmacists participating in the prevention and treatment of novel coronavirus pneumonia and public health emergencies, with a view to providing reference for strengthening the Chinese medicine participation in infectious disease teams and improving the system of multiple forces of Chinese medicine participating in public health emergencies.

6. Prescription Rules and Mechanisms of Herbal Prevention Prescriptions for COVID-19 by Data Mining and Network Pharmacology

Keywords : Data mining; network pharmacology; novel coronavirus pneumonia; traditional Chinese medicine; preventive recipes;

Ma Lijuan; Bao Zhenghan; Lei Leting; et al. *Modernization of Traditional Chinese Medicine and Materia Medica-World Science and Technology.* TP311.13;R285

Abstract: Objective Based on data mining and network pharmacology, the objective of this research is to explore the prescription rules and mechanism of traditional Chinese medicine(TCM) prevention for 2019 novel coronavirus pneumonia(COVID-19). Methods Data mining and association rules were used to investigate the rules of

officially announced TCM prevention prescription. Furthermore, KEGG pathway and Gene Ontology analysis were performed by BATMAN-TCM to investigate the potential signaling pathways of core drugs for novel coronavirus pneumonia prevention. Results Based on the 63 formulas and Chinese patent medicine included in this research, 14 high-frequency Chinese Materia Medica were counted. Moreover, 14 high-frequency medicine pair and 15 high-frequency medicine group were found out by association rules analysis. Interestingly, “Fang Feng, Bai Zhu and Huang Qi” and “Huo Xiang and Cang Zhu” were the critical high-frequency medicine group. The former plays a preventive role mainly by interfering with basic metabolic pathways such as amino acid metabolism and purine metabolism, while the latter by participating in inflammation-related reactions in addition to basic metabolism. Conclusion The critical medicine groups of novel coronary pneumonia prevention formulae are “Fang Feng, Bai Zhu and Huang Qi” and “Huo Xiang and Cang Zhu”, which exert preventive effects through basal metabolism and inflammation-related pathways, respectively. This provides a guideline for “prevention before disease”.

7. Discussion on Scientific Basis of Acupuncture Prevention and Treatment of Novel Coronavirus Pneumonia from “Inflammatory Storm” Theory

Keywords: Novel coronavirus pneumonia; inflammatory storm; acupuncture; inflammatory factors; anti-inflammatory factors;

He Yujun; Song Boqi; Yang Lingyu; et al. *Modernization of Traditional Chinese Medicine and Materia Medica-World Science and Technology*. R246.1

Abstract : Recently, novel coronavirus has been widely spread throughout the country, which has caused great harm to people’s lives and health. Novel coronavirus pneumonia is an important factor leading to the aggravation or even death of patients with new coronavirus pneumonia. Based on this theory, University of science and technology of China has achieved initial results in the application of drugs that inhibit inflammatory factors. Acupuncture has been widely used in the treatment of a variety of inflammatory diseases. A large number of experiments also confirmed that acupuncture can inhibit a variety of inflammatory factors from a variety of ways, and can activate a variety of anti-inflammatory factors to play an anti-inflammatory role. It

is expected that acupuncture can alleviate the autoimmune complications caused by new coronavirus infection by alleviating the “inflammatory storm”.

8. Research Progress of Traditional Chinese Medicine and Modern Medicine in Prevention and Treatment of the Novel Coronavirus Pneumonia

Keywords: Novel coronavirus pneumonia; inflammation; deep airway; epidemic gas; traditional Chinese medicine; critical care; syndrome differentiation;

Zang Mingquan;Ren Jianlin;Zhang Yingxuan;et al. *Modernization of Traditional Chinese Medicine and Materia Medica-World Science and Technology*. R563.1

Abstract : Novel coronavirus pneumonia(COVID-19) refers to viral pneumonia caused mainly by fever, cough, headache, fatigue, and dyspnea caused by the new coronavirus(2019-nCoV). The earliest patient with COVID-19 was found in Wuhan. The infection is usually within 14 days. The virus is highly contagious. As of February 23, 2020, a total of 77,049 COVID-19 patients were confirmed diagnosis, resulting in no less than 2445 patients death. Compared with SARS, COVID-19 progresses faster, and critically ill patients often have lung injury, liver dysfunction, acute respiratory distress syndrome, and eventually develop multiple organ failure and shock. The pathological mechanism of critically ill patients with COVID-19 is still unclear, and some scholars have revealed abnormal liver function in patients with COVID-19 from the waterfall of inflammation caused by the 2019-nCoV. The pathological development of COVID-19 needs to be confirmed by detailed anatomic and pathological studies. The damage caused by COVID-19 to our country is no less than that of the outbreak of SARS in China in 2003. In the current COVID-19 prevention and treatment work, there is still no globally accepted treatment guideline for the best curative effect, and traditional Chinese medicine and modern medicine measures have been reported. This article summarizes the latest traditional Chinese medicine and modern medicine prevention methods and measures for COVID-19, and provides support for the prevention and treatment of COVID-19.

9. Exploring the Prescription Rule of Traditional Chinese Medicine in the Treatment of Coronavirus Disease 2019 Based on Data Mining a Case Analysis is Attached

Keywords: COVID-19; drug characteristics; prescription rules; data mining; case analysis;

Zhang Weijian;Guo Shaoju;Jiang Xiaoyan;et al. *Modernization of Traditional*

Chinese Medicine and Materia Medica-World Science and Technology. R259;TP311.

13

Abstract: Objective To analyse the medication characteristics and prescription rules of Traditional Chinese Medicine(TCM) in the treatment of corona virus disease 2019(COVID-19), so as to provide reference for clinical prescription and give full play to the advantages of prevention and treatment of TCM. Methods Based on the Traditional Chinese Medicine Inheritance Support Platform V2.5, data mining methods, such as Apriori association rule algorithm and complex system entropy clustering, were used to calculate the basic information of herbs in the prescriptions of COVID-19, and the core drug combinations and prescription rules were analysed. Results There were a total of 159 prescriptions for COVID-19 were collected, involving 168 traditional Chinese medicines, high-frequency herbs include almond, Pinellia ternata, licorice, Poria cocos, patchouli, etc., core combinations include gypsum-almond, Pinellia ternate - Poria cocos, ephedra-almond, etc., potential commonly used herbal pair include aconite-gypsum, patchouli ephedra, forsythia-cicada, etc., and 4 new prescriptions were obtained by unsupervised entropy hierarchical cluster analysis. Conclusion The core drug combination of traditional Chinese medicine in the treatment of COVID-19 are Maxing Shigan Decoction and Huo pu Xia ling Decoction, In the treatment principle, the methods of invigorating the lung and regulating qi, dispelling dampness, invigorating the spleen and replenishing qi, purge phlegm and relieve depression, clearing heat and detoxification are used at the same time, and support vital qi and dispel evil qi at the same time, regulate the lung, spleen and stomach together; However, in clinic, it is necessary to take into account the pathogenesis characteristics of yin deficiency, blood stasis, involving liver and kidney, in the middle and later stage, properly supplemented with nourishing yin and moistening dryness,

activating blood circulation and dredging collaterals and regulating liver and kidney, so as to prevent the severe transformation of injuring yin and damaging yang and epidemic toxin into blood.

10. Discussion on the Treatment of Severe and Critical Novel Coronavirus Pneumonia with Traditional Chinese Medicine Based on "Cytokine Storm"

Keywords: Covid-19; cytokine storm; severe, critical; TCM Treatment; Wang Li; Xu Yanwu; He Jiancheng; *Chinese Archives of Traditional Chinese Medicine*. R259.

Abstract: the pathogenesis of "cytokine storm" is complex, easy to cause multi-organ failure, leading to rapid disease, deterioration, high mortality. In this outbreak of new coronavirus pneumonia (COVID 19), the rapid deterioration and death of patients is closely related to the outbreak of "cytokine storm" in their bodies. The diagnosis and treatment plan for pneumonia caused by novel coronavirus infection (trial 7th edition) (hereinafter referred to as the "diagnosis and treatment plan") formulated the TCM plan for severe and critical COVID 19. Traditional Chinese medicine (TCM) has attracted much attention due to its advantages of multi-component, multi-target and multi-approach holistic treatment. Based on "cytokine storm" and combined with the syndrome differentiation and recommended prescription of severe and critical covid-19 in the diagnosis and treatment program, this paper discussed the possible role and mechanism of TCM in the treatment of severe and critical covid-19.