## Overview of research on prevention and control of novel coronavirus pneumonia based on traditional Chinese medicine theories and methods

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Abstract: From ancient times to the present, the plague has had a huge impact on human life. Traditional Chinese medicine has also accumulated valuable epidemic prevention theories and methods from the practice of anti-epidemic, and formed a unique epidemic prevention thinking. Chinese medicine is good at using the thinking of the three talents of heaven, earth and human beings to adjust the epidemic situation according to the time and place, and uses the thinking of five transports and six qi to predict the development trend of the epidemic and guide the clinical treatment rules. Physicians of later generations summed up the characteristics of epidemics and put forward many theories and ideas of traditional Chinese medicine for epidemic prevention, including Wu Youxing's theory of suffocating qi and the thinking of dialectical treatment of Jiu Chuan, the differentiation and treatment method of Wei qi and nourishing blood of rotten throat Dansha, and the essence of grasping the essence of Lingnan famous Chinese medicine. Deng Tietao's thoughts on the diagnosis and treatment of SARS in the fight against SARS, etc. This article will summarize the thinking theories of traditional Chinese medicine for epidemic prevention and control and China's traditional epidemic prevention measures, and give an overview and explanation in combination with the current domestic new coronavirus prevention and control work.

**Key words:** plague; traditional epidemic prevention theoretical thinking; traditional epidemic prevention measures; new coronavirus pneumonia

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### Introduction

At present, the epidemic of new pneumonia in the world is still in a critical stage of prevention and control. Traditional Chinese medicine has achieved satisfactory prevention and control effects on the acute spread of new coronary pneumonia. Preliminary research on the prevention and control of novel coronavirus pneumonia. It can be seen from ancient documents that traditional Chinese medicine has formed a set of theories and thinking systems in the practice of epidemic prevention in the past dynasties, and has also passed down many government epidemic prevention ideas and folk epidemic prevention methods, which are very worthy of our reference and further thinking.

# 1. The traditional theoretical thinking of epidemic prevention in Chinese medicine and the thinking of new coronary pneumonia

## 1.1 The thinking of the three talents of heaven, earth and people to distinguish the epidemic

The thinking of the three talents of heaven, earth and man is the structure and origin of traditional Chinese philosophical theory. Traditional medicine has used the three-talented thinking mode since ancient times to analyze the causes and development trends of plagues in various periods, and to come up with prevention methods that are adapted to the conditions of the time and place. Specifically, the epidemic situation can be analyzed from three aspects: 1) The factors of the sky include the fortune of the year, the climate environment and the characteristics of the epidemic. Wu Tang said: "Speaking about the luck of the air is the beginning of the original febrile disease." "Su Wen" also said that "if the four seasons are not in season, there will be a great epidemic." "This is the relationship between the weather and the epidemic: life is between heaven and earth, It is related to the five fortunes of the sky, so the five fortunes fall out of control, the four seasons are out of season, the abnormal qi changes, and the human senses cause a great epidemic; 2) The factors of the earth include the geographical position and the natural environment. The Treatise says: "The south produces heat" and "the center produces dampness", which points out that the six qi (wind, cold, summer, dampness, dryness and fire) tend to be different in different regions. The difference in treatment is the same? ... the terrain dictates." The differences in the geographical environment between the north and the south have resulted in different emphasis on pathogens in different places. The treatment must be adjusted according to local conditions. Produces humidity and temperature. In addition, it also includes the impact of natural disasters

on the epidemic, including floods, droughts, locust plagues, earthquakes, etc.; 3) Human factors include righteousness, movement of the five internal organs, age and gender, and social factors. Enough righteousness can resist the invasion of evil qi The human body, that is, the righteousness exists in the body, and the evil spirits cannot be removed. Social factors include war, famine, and crowds of people moving together. The "Diagnosis of Febrile Diseases" once pointed out that "Wu's eyes were full of warm epidemics when Chongzhen was in fierce famine and war. "Wu Tang thinks that the cause of the epidemic is inseparable from the famine and war. In addition, the gathering and migration of people is also an important social factor that induces the spread of the epidemic. From another point of view, the three factors of heaven, earth and people are synergistic. Combining organically and conducting an overall analysis of the epidemic situation, we can draw an epidemic prevention strategy based on three factors.

Examining the characteristics of the new type of coronavirus pneumonia: From the perspective of the luck and climate of "heaven", according to the China Weather Network's 2019 climate summary in Wuhan: Hubei's temperature is generally high, especially after the plum blossoms on July 18, the west is affected by the weather. Affected by the Pacific subtropical high, sustained high temperature weather occurred. Affected by the alternation of cold air, the inter-monthly temperature changes greatly, and major climatic events such as low temperature in winter, rainy and little sunshine in winter, high temperature in summer, continuous drought in autumn and autumn, and "autumn tiger" occur successively throughout the year. The epidemic started in 2019. The first year is already old, and the soil is transported. The soil is not old enough, and the wind and wood are prevalent. The climate is generally disturbed by the wind, wood and Shaoyang. The actual climate is more in line with the calculation of the Five Lucks and Six Qi. However, when the epidemic occurred in Wuhan, it was rainy and rainy for half a month before and after the winter solstice, so in the general wind-heat climate, there was a cold and humid atmosphere. From the point of view of distinguishing "place": According to the azimuth and geographical analysis, Wuhan is located in central China, with a subtropical monsoon climate for many years, at the junction of the Yangtze River and the Han River. Heat is generated in the south, and dampness is generated in the center. It is a typical hot and humid area, and damp and heat are abundant. From the perspective of distinguishing "people", the first thing to focus on is whether the body's righteousness is sufficient: "Jinkui Zhenyan" says, "Those who are hidden in the essence will not get sick in spring. Warm." As the so-called plague and evil gather together, its qi will be deficient, so in this epidemic, elderly patients are prone to severe illness. Wuhan's Submit a manuscript: https://www.tmrjournals.com/ghr

diet is too fatty, and people are prone to form a phlegm-dampness constitution. Secondly, look at social factors: Wuhan is a prosperous city with dense crowds, and there are many people coming and going from various places, so it is easy to cause the spread of the epidemic. To sum up the above analysis: Wuhan area is a pathogenic environment of heaven and earth with Shaoyang wind, wood and damp and heat as the main, and cold and damp in it. Judging from the "Diagnosis and Treatment Plan for Novel Coronavirus Infected Pneumonia (Trial Version 6)", most of the patients are mainly with damp-heat stagnant lung syndrome and damp-toxin closed lung syndrome, which are in line with wind and wood qi and Characteristics of hot and humid regions. However, due to the invasion of personal constitution and cold-dampness qi, some patients can still show cold-dampness stagnation of the lung syndrome dominated by cold symptoms when they first feel it.

### 1.2 The Theory of Five Movements and Six Qi

"Plain Questions: The Six-Section Zangxiang Theory" "I don't know what the years add, the rise and fall of qi, and the origin of emptiness and reality, so I can't work." Knowing the five movements and six qi, the doctor can grasp the time of the sky, predict the opportunity of the epidemic, and treat it with The method according to the time; for the theory of "three of epidemic transformation", Wen · Postscript Theory" has "five fortunes are violent, rigid and soft, and three years of epidemic transformation." Professor Gu Zhishan pointed out that the three deficiencies caused the epidemic: "The five internal organs The emptiness, the emptiness of the sky, and the emptiness of evil", the pathogenesis is the loss of rigidity and softness, and the epidemic has been transformed in three years. That is, the six qi are yin and yang, and the hardness and softness are not good. Regarding the relationship between the five qi and the six qi and the epidemic, it is said in "Plain Questions: The Treatise on This Disease": "The qi of heaven and earth meet, but it is the elephant of Thailand." If the sky wants to descend, it will not descend., the earth wants to rise and cannot rise. If the ascending fails to move forward, the descending fails to descend, or the ascending and descending fails to move forward, the qi communication is abnormal. The disorder of qi communication is accompanied by the victory and suppression of the five elements, so the disease of plague can occur; in addition, the five qi and the six qi have abnormal changes of repositioning and abdication, that is, the heaven can not be in the right position. In addition, there is also the change of the two Jiazi of the heaven and the earth and the change of the heaven and the earth, which can cause plagues. Qi Bo said: "Those who lose their positions are said to have attained the righteousness of the year, but have not attained them.

The ruler who is in the right position means that the four seasons are not seasoned, that is, there is a great epidemic." Si Tian is in the spring, and the upper and lower levels are in harmony and govern the qi of heaven and earth. When the four seasons are not seasoned, an epidemic occurs. Regarding the induction of the five internal organs of the human body and the epidemic qi, Qi Bo said: "Man's five treasures are not enough, and the sky will be empty, and the evil will come." This sentence points out that the sky moves the epidemic qi., often with the emptiness of the five Zang of the human body, and disease. For example, when SARS was prevalent, Gu Zhishan, based on the "three-year epidemic" theory in "Su Wen" [1,2], could clearly speculate that a "golden epidemic" would occur in 2002-2003, that is, the epidemic of lung disease. And according to the theory of luck and luck, a correct judgment was made on the peak period and subsidence period of SARS. It can be seen that the theory of luck, which has been practiced for thousands of years, has become an important prediction method for the occurrence, development and disappearance of the epidemic.

According to the "three-year transformation of two epidemics", three years ago was the year of Ding You, the year of Ding You fell from the right position, and after three years of transformation, it became a "wood epidemic". The new coronary pneumonia has the characteristics of "wood epidemic" and is more infectious. In addition, the Dingyou year was Yangming Dryness Jinsitian, so the "fuxie" that affected three years later was Fuzao, so clinically, when drying dampness, it is necessary to take into account the situation of Fuzao injuring the lungs and causing severe cases [3].

"Su Wen Six Yuan Zheng Ji Da Lun" once said: "Jueyin is the ruler of the sky...the end of the gas, the commander of the fire, the yang is the big change...the disease is mild and severe." The epidemic in Wuhan started in 2019. At the end of the year, the year of Yihai, Jueyin Fengmu is in the sky, and Shaoyang phase fire is in the spring, that is, the second half of the year is the main command of Shaoyang phase fire. When the gi of the end comes from the light snow to the great cold, it is necessary to have the courtesy of the fire of Shaoyang, and the winter can only be hidden when it is cold. In terms of inferred regional susceptibility, Wuhan is located in the humid tropics, and the air of wind and wood is easy to trigger the heat in the humid and hot areas. Zhou Mingxin [4] speculated that the susceptible areas are Jiangsu, Zhejiang, Shandong, Hunan, Guangdong and Guangxi and other humid and hot areas. In terms of susceptibility constitution: Heaven and man are sensitive, and the abnormal qi of the sky is also related to the different viscera of human beings. The spleen and spleen are prone to dampness and heat, and the susceptible people are mostly middle-aged and elderly people with kidney deficiency and liver vigor. Or the middle-aged and young people with spleen deficiency and obesity; from the forecast and analysis of the new type of coronavirus pneumonia disease situation, after January 20, it will be the beginning of the Gengzi period to transport Shaojiaomu. It still belongs to the qi of wind and wood, so the epidemic of the qi of the zhe and the solar term belongs to the stage of development and spread. To the fifth qi, that is, in the second half of the year, the less expedition is in Taishang, the relative fire is not as good as Taiyin, the wind and temperature qi is frustrated, and the epidemic situation should be greatly reduced. Under the effective prevention and control measures of the government, it is believed that the time for the decline of the epidemic should be earlier than the predicted time.

## 1.3 The Doctrine of Violence and the Thought of Nine Biography in "The Plague"

Wu Youke created the theory of the etiology of "hostile qi", creatively proposing that the plague was not caused by the six evil qi, but was caused by a "peculiar qi" in nature. He summed up the characteristics of hostility in advance [5]: 1) The transmission route of hostility: it enters from the mouth and nose. 2) There are species differences in the contagion of hostile qi. For example, "The Treatise on Warming and Epidemic Diseases: On the Different Injury of Qi" says: "People are sick but animals are not sick, and the injuries are different because of their different ears." 3) Hostility Qi has affinity for specific zang-fu organs. For example, "Plague Theory" says: "A certain qi is suitable for a certain zang-fu organs and meridians." The epidemic and the spread of infection; "The Plague" has a statement "either in the city, or in the village" "the epidemic person feels the evil spirit of heaven and earth... There are ups and downs in the four seasons." That is to say, the origin of malice is The unique and violent rise and fall is related to the four seasons and is temporal. In addition, on the basis of the hostile qi theory, Wu also created the concept of transmission and transformation of the evil-membrane element and the nine internal and external traditions. which broke through the system of dialectical differentiation of the six meridians of typhoid fever. The law of its transmission is different from that of typhoid fever, but it does not appear between the outside and the inside [6].

This new coronary pneumonia, the main disease site is the lungs, involving the spleen and stomach. It has obvious regional characteristics: it first appeared in Wuhan, Hubei, and it is an important infection area. According to Wu Youke's theory of transmission of qi from the outside to the inside, this qi is centered on "dampness", enters from the mouth, nose and eyes, hides between the membranes, and then spreads into

the lungs and spleen, and spreads outward. Entering the Lung Guard, the clinical syndrome of the combination of the two meridians is often seen. During the observation period, there are spleen and stomach symptoms such as fatigue, fever and gastrointestinal discomfort. If there is a slight soreness of the limbs or the appearance of aversion to cold and white fur, it can be taken into medicines such as ephedra, gypsum, and Qianghuo, which means exorcism. If the evil is blocking the film, it can be used to dispel the evil, fragrant and turbid betel nut, grass fruit, Magnolia, Scutellaria and other medicines, and dispel the evil and damp heat of the film. If Xie Sheng turns into severe disease and forms a syndrome of internal closure and external disengagement, Shenfu Decoction, Angong Niuhuang Pill and other prescriptions can be used immediately to remove phlegm and clear the orifices, and solidify the disease.

### 1.4 Grasp the essence and seek the cause through dialectics

Yi Jusun, Luo Zhiyuan, Li Peilan and other famous Chinese medicine practitioners in Lingnan[7] mentioned in the etiology, pathogenesis and treatment principles of Jiawu Plague: If doctors only observe the appearance of the disease and do not explore its essence, it will only delay the best treatment of the epidemic. opportunity. As the "Yellow Emperor's Classic of Internal Medicine" says: "Yin and Yang are the way of heaven and earth... The cure must be based on the root". Zhong Jingyou said: "Yang poison is a disease, with red spots on the face like brocade patterns, and Shengma Biejia Decoction is the main source of it.", although the symptoms are not the same. but the source of the disease is the same. Epidemic qi enters from the mouth, nose or fur, and before it enters the viscera, it must be hidden in the skin, muscles, and between the meridians, chest, and diaphragm. Cimicifuga is an essential medicine for this recipe. Cimicifuga can make the evil qi of the chest and diaphragm come out of the mouth and nose, and the rise and fall are caused by each other. Insufficient yin. It can be seen from the above: Shengma Biejia Decoction can directly reach the place where the evil qi of the plague hides, and the evil poison will be lifted and dispersed on the top, and it will be solved from the outside, which is just in line with the pathogenesis of the epidemic.

In addition to grasping the nature of the epidemic evil, syndrome differentiation and treatment are essential. Deng Lao [8] once said: "Traditional Chinese medicine does not focus on pathogens, but on the syndromes manifested when the pathogens fight against the righteousness of the human body." The way for evil to go out is not to kill viruses, but to attract and exorcise evil. During Mr. Deng's fight against the SARS epidemic, patients often had a combination of

suffocation, blood stasis, dampness, poison, and deficiency. He believed that SARS was the essential characteristic of suffocating evil qi, and then combined with the actual syndrome characteristics, respectively, to give attention to the disease. The actual efficacy of the syndrome differentiation and treatment plan for each syndrome in the early, middle and extreme stages, which is dominated by dampness, also confirms the unique insights of traditional Chinese medicine to combat the epidemic.

According to the "Diagnosis and Treatment Plan for Novel Coronavirus Infected Pneumonia (Trial Version 5)" [9], most patients have the symptoms of sticky stool, dry mouth but not thirst, poor sweating, slippery tongue coating, or wet or slippery pulse. Regardless of the nature of cold and heat, the core pathogenesis of the epidemic is "dampness toxin". Some patients initially feel the symptoms of cold and dampness. Severe patients are mainly characterized by damp-heat closed lung syndrome and qi and yin burnt syndrome. The pathogenesis should revolve around "dampness toxin", which can form the syndrome of dampness trapping in the middle Jiao, cold and dampness dissolving heat, dampness toxin accumulating in the lungs, yangming the bowels, internal closure and external prolapse, and deep heat. For residual pathogens, there is nothing to rely on. It is recommended to use Shengsheng Powder, Pingwei Powder, Houpu Xialing Decoction, Huoxiang Zhengqi Powder, etc. as the basis for the treatment of dampness. Should be able to have a better treatment effect.

## 1.5 Thoughts on the differentiation and treatment of Wei qi and nourishing blood in Dansha with rotten throat

According to the History of Epidemic Diseases in China, at the age of Renshen in the Republic of China, Dansha with rotten throat was prevalent in the old capital. According to Liu Minshu's "The Remedy of Pandemics", gypsum is an essential medicine for heat epidemics. However, in this disease, special plaster is not allowed, and there are many living patients who have been treated by (Songru) for severe patients. It can be seen from this that even if the epidemics are all fever epidemics, the same method cannot be used for epidemic diseases of different periods and different types of diseases, and prescriptions should be prescribed according to the actual situation; Ma Bie Jia soup is the master. Ding Ganren[10] advocated the sweating method as the essential method for the disease. He used the defense, qi, camp, and blood as the dialectical guideline. The first, middle and last floors. At the beginning of the evil is in the division of qi, and the treatment method is more important than penetration. In the middle stage of the disease, from the Qi points to the Ying points, the treatment is based on the clear method or the lower method, which is

supplemented by the penetrating method. At the end stage, it should be clearing away heat and detoxifying, accompanied by clearing away heat and stomach.

From the analysis of the new coronary pneumonia from the defense of the qi and the blood, the coronary pneumonia is mostly a damp-heat epidemic pathogen, so the disease process of the new coronary pneumonia can be divided into four stages: "protect the qi and nourish the blood". Warm pathogens are the first to attack the lung guard, and the Wei syndrome shows mild aversion to cold, cough, heavy physical distress, the lungs and the large intestine are in and out, or the stool is sticky and uncomfortable. Wei said afterward that the damp-heat pathogenic poison of the pneumonia was relatively heavy this time, and it was easy for Wei to penetrate into the Qi points, or even directly to the Ying points. Causes the same disease of qi and battalion, vomiting blood and epistaxis due to heat toxin forcing blood, and delirium caused by damp-heat toxin entering the battalion. If the righteous qi is weakened, the evil toxin can be reversibly transmitted to the pericardium, enter the blood, and form a critical syndrome of internal closure of the evil toxin; in terms of treatment principles, for the damp-heat evil toxin, the Weifen should be detoxified and dampened. Qi should be treated with the method of dispelling pathogenic factors and eliminating dampness, and the method of clearing away heat and eliminating dampness should be used together. For critically ill patients, the method of clearing and tonic, cooling blood and opening orifices is applied. The whole process should support righteousness and protect the camp blood to prevent the occurrence of critical illness such as retrograde transmission and invagination.

# 2. The enlightenment of the exploration of ancient traditional ideas of epidemic prevention to the prevention and control of coronavirus pneumonia:

### 2.1 Isolation and Quarantine System

"Han Shu Pingdi Ji" records the preventive measures of "people who are sick, leave the empty mansion as a doctor". In the Sui Dynasty, the "Infected People's Workshop" was set up to isolate leprosy patients [11]. "Release of the Dao Xuan Xun, The Biography of the High Monks" also records the "Infected People's Workshop": "It also adopts the diseased people, and the men and women are separated from each other, and they are supported at four o'clock, and they are given weekly." "Southern Dynasty Qi Hui Yao Civil Affairs" records that Xiao Qi's Prince Changmao and others set up a patient isolation institution, the Six Diseases Hall, to isolate and treat the sick; The rapid construction of Huoshenshan Hospital, the centralized treatment and isolation of patients, is of great significance to

preventing the widespread spread of the epidemic.

### 2.2 Modern immunotherapy

In my country, the treatment method of "fighting poison with poison" has long been established. In Ge Hong's "Elbow Reserve Emergency Recipe" of the Jin Dynasty, there is a record of the method of rabies brain compress to treat rabies bites. In the Song Dynasty, human pox vaccination was started [12], and Cheng Congzhou's "Maoxian Medical Records" recorded the pox clothing method, the pox pulp method, the dry seedling method, and the water seedling method. In the Qing Dynasty, the Vaccination Bureau was established, which was the earliest immunization institution in the world. When influenza broke out worldwide, in addition to isolation and disinfection measures, vaccine prevention was an important method in Western medicine, and live attenuated vaccines and inactivated vaccines were developed. When a new influenza disease occurs, a new vaccine must be prepared to prevent it. In the face of the current coronavirus epidemic, in order to prevent the coronavirus from remaining in the population for a long time, the country immediately launched a vaccine development work plan, which has far-reaching significance for the future prevention and control of the epidemic.

## 2.3 Public environmental hygiene and personal hygiene

Earlier than the "Shan Hai Jing", the hygienic and disease prevention measures were proposed to separate people and animals, clean houses, and deworm and bathe. "Huainanzi · Sixun Lun" records that "Zhejiang dogs do not invest in rivers", which attaches great importance to preventing pollutants from infringing on water sources and preventing the spread of epidemics; "Preparing for Emergencies" proposes well water disinfection, air disinfection and realgar disinfection. Among them, fumigation and epidemic prevention is an important air anti-virus measure. "Elbow Reserve Emergency Recipe" first proposed to use realgar, orpiment, cinnabar and other medicines to make Taiyi Liuiinfang, Hutou Killing Ghost Recipe, Realgar Pill and other prescriptions, and the dosage form is pills He powder, which is used by igniting cigarette smoke, until today, medicines such as Angelica dahurica, Atractylodes japonica, and wormwood are still important air disinfection medicines [13]; To prevent the accumulation of dirt", pay attention to the cleanliness of the water source to prevent the epidemic; "Book of Tang, Baiguan Zhi" records that there are officials who specialize in managing public toilets, "the toilet in the palace is in the palm of the hand, and the order is issued"; the treatment of sick corpses, "The Book of Wei - Emperor Sejong Xuanwu Ji" records that when Emperor Xuanwu "decreed to bury

the exposed corpse" to avoid the spread of the epidemic caused by the corpse.

Novel coronavirus pneumonia can be transmitted through droplets, aerosols, urine, etc., and the ancient method of fumigation can inhibit and kill virus residues in the air. Traditional fumigation commonly used drugs such as Atractylodes and mugwort leaves. There are experiments. Studies have shown [14] that Atractylodes ketone has sterilization effect on three influenza viruses, namely Type A H3N2, Type A H5N1 and Type B, and the sterilization rate of moxa stick fumigation combined with ultraviolet irradiation can reach 94.7% [15]. In addition, the application of anti-toxic and evil drugs such as traditional realgar disinfection, Taiyiliujinfang and Hutouzhiguifang can be used for reference in water sources and public places.

### 2.4 Isolation and elimination of infectious agents

The isolation and elimination of infectious agents "animals and insects" has been known since ancient times. In the "Plague Compilation", there is a record of the infectious agent: "The plague is widespread, and there are red-headed bluebottles in groups of hundreds of thousands. Anyone who enters someone's home will surely suffer from the plague and die." The "Compendium of Materia Medica" records that Baibu, wormwood and other drugs can repel mosquitoes; "Beijiang Poetry" records the Yunnan plague in the Qianlong year, and recognizes that rats are the source of infection of the epidemic. "Book of Songs" "smothered the rat in the vault and stuffed it into the house", the ancients had measures to block the rat hole and smoke to kill the rat. All the hosts of the new coronavirus (SARSr-CoV) have not yet been completely identified, but the latest research has shown that Zhejiang Zhoushan bats are likely to be the host source of this outbreak [16], and the intermediate host is likely to be pangolins [17]. Since pangolins are rare animals, we can learn from traditional isolation methods and use traditional Chinese medicine powder with insecticidal effects to contain and isolate animal hosts. Controlling and blocking the source of the virus host is of great significance to avoid the resurgence of the coronavirus.

### 2.5 Protection of susceptible populations

According to the History and Practice of Epidemic Diseases in China, the ancients already had protection methods in terms of physical protection, taking medicine to prevent evil, and immune prevention. In terms of preventing diseases of the human body: "The Great Theory of Adjusting the Spirit of Four Qi" emphasizes "do not cure one's own disease and cure the disease before", and proposes "internally nourishing righteousness, externally warding off evil winds", "smoothing the four seasons of yin and yang",

"deficiency evil and thief wind, avoid it "Sometimes" protection principle; "Prescriptions for Emergencies", "Dietary Materia Medica" and Sun Simiao put forward methods such as nourishing, guiding, fasting, and nourishing to strengthen the body's ability to resist diseases; The traditional Chinese medicine bath is also an important traditional home epidemic prevention method. It is recorded that the commonly used medicines such as Peilan, Chuanxiong, Cangzhu, Angelica, and Lingxiang are used for sitz baths, so as to force the evil to be dispersed by sweat. Purpose. Under the current coronavirus epidemic, the protection measures for susceptible people are mainly isolation and prevention with traditional Chinese medicine. Since people are generally susceptible, the Central Epidemic Response Leading Group immediately ordered the closure of villages, towns and living quarters to block Wuhan at the beginning of the epidemic. All traffic effectively protects the susceptible population across the country. It is recommended to take Pneumonia No. 1 preventive prescription to improve the ability of the crowd to resist evil. In addition, it is recommended to popularize the traditional Chinese medicine exercises Baduanjin and Wuqinxi, as well as the way of life of traditional Chinese medicine that conforms to the four seasons of health preservation, which will help improve the physical quality of people who are isolated at home.

### 3. Summary and Outlook

Since ancient times, the traditional Chinese epidemic prevention theory summarized after many epidemic practices still plays an important role in the current novel coronavirus pneumonia epidemic. Traditional Chinese medicine adheres to the thinking mode of heaven, earth and human beings. In addition to paying attention to the clinical symptoms of patients, it also pays attention to factors affecting the development of the epidemic, such as the prevalence of Shaoyang fire in the year of Yihai, the characteristics of Wuhan's subtropical monsoon climate, and the humid and hot areas of Wuhan. In addition, through the thinking of five luck and six qi, except for the positive effect of comprehensive isolation measures, it is predicted that the epidemic will drop sharply in the second half of this year. It is speculated that people with normal liver prosperous and spleen deficiency and liver and kidney yin deficiency are susceptible people, and regions such as the Jianghuai region are susceptible areas. In terms of clinical treatment, it is necessary to grasp the nature of the disease and combine syndrome differentiation and treatment. The important pathogenic pathogen that needs to be grasped in the current pneumonia is "dampness", and the treatment center should focus on dampness pathogens. In public epidemic prevention measures, the method of killing coronavirus in

high-concentration aerosols and droplets can learn from the ancient method of fumigation. There are many effective measures in the traditional protection of susceptible populations, the elimination of infectious agents, and the cutting of transmission routes. It is hoped that from the ancient thinking and methods of epidemic prevention and control, we can learn from the experience of predecessors in successfully fighting the epidemic, which can be useful for today. The prevention and control of the new crown pneumonia epidemic has enlightenment and reference.

#### References

- 1. Sun Xue, Liang Jianqing, Wang Gongchen, et al. The embodiment of the "three talents" integrated medical model in Dunhuang medical literature. Journal of Gansu University of Traditional Chinese Medicine, 2019, 36(03): 75-78.
- 2. Gu Zhishan. The Enlightenment of Fortune Theory on the Differentiation and Treatment of SARS in Traditional Chinese Medicine. China Journal of Traditional Chinese Medicine, 2005(05):261-264+260.
- Gu Zhishan. "Three Deficiencies" Caused Epidemic: TCM's Understanding of the Cause of Epidemic Diseases. Chinese Journal of Basic Medicine of Traditional Chinese Medicine, 2009, 15(05): 350-351.
- 4. Zhou Mingxin. Identifying and Preventing Novel Coronavirus Pneumonia from the Five Movements and Six Qi. Journal of Traditional Chinese Medicine, 2020(02): 1-5.
- Zhao Shugang. A brief explanation of the innovative contribution of Wu Youxing's "War Epidemic" to infectious diseases. Journal of Chinese Medicine, 2005(01):106-108.
- 6. Huang Yuyan. On the external and internal transmission of epidemic diseases in traditional Chinese medicine (Part 2) external and internal transmission. Shizhen Chinese Medicine and Chinese Medicine, 2014, 25(03): 666-668.
- 7. Qu Zhiqin, Luo Ying, Wen Jiexian. A review of the famous Chinese medicine practitioners in Lingnan to fight against the "Jiawu Plague". Journal of Guangzhou University of Traditional Chinese Medicine, 2019, 36(09): 1462-1465.
- 8. Deng Tietao. On TCM Diagnosis and Treatment of SARS. Tianjin Traditional Chinese Medicine, 2003(03): 4-8.
- 9. Diagnosis and treatment plan for pneumonia caused by novel coronavirus infection (trial version 5). Chinese Journal of Integrative Medicine: 1-3.
- 10. Zhou Peiqing. Ding Ganren, a giant of modern Chinese medicine: a record of his treatment of rotten throat Sha. Shanghai Journal of Traditional

- Chinese Medicine, 1989(09): 28.
- 11. Ban Gu. Historical Records. Beijing: Zhonghua Book Company, 1962.15-17
- 12. Huang Hui. Human pox vaccination. Clinical Journal of Traditional Chinese Medicine, 2013, 25(02): 188.
- 13. Kang Hui, Ke Zineng, Fang Xiaoyang. A tentative discussion on fumigation and epidemic prevention in Sun Simiao's "Prescriptions for Emergencies". Shizhen Chinese Medicine and Chinese Medicine, 2006(11): 2340.
- 14. Shi Shujiang, Qin Zhen, Kong Songzhi, Lai Xiaoping, Su Ziren, Zeng Huifang. Screening of active ingredients of Atractylodes Rhizoma against influenza virus. Shizhen Traditional Chinese Medicine, 2012, 23(03): 565-566.
- 15. Ye Bairu, Huang Qiangwei, Xu Wumin, Jin Lingwei. Observation on the effect of fumigation with moxa sticks combined with ultraviolet irradiation on air disinfection of hemodialysis room. Chinese Journal of Integrated Traditional Chinese and Western Medicine Nephrology, 2017, 18(01): 68-69.
- Nanshan Chen, Min Zhou, Xuan Dong, etc. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. The Lancet, 2020, 395 (10223).
- 17. Zhou Peng, Yang Xing-Lou, Wang Xian-Guang, etc. A pneumonia outbreak associated with a new coronavirus of probable bat origin. Nature, 2020.