

# 英国中医联盟丛刊

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# 前言

英国中医联盟学会丛刊，是一个以已经发表论文为主要内容的论文集。丛刊内所有收集文章均征得论文作者同意，丛刊仅供内部会员参考，交流，学习，不对外发行。

本期丛刊是第一期，主要内容以新冠肺炎为主。一年来新冠疫情席卷全球，在这场疫情中中医药扮演了极为重要的角色，发挥了巨大的作用，中国在疫情中的出色表现更是为中医药的绝佳疗效提供了不可撼动的强有力证据。“事实胜于雄辩”，尽管西方医学界还是一如既往的对中医药不屑一顾，但我们坚信在疫情过后，许多国家重新审视应对这场全球性灾难时的种种失误及付出的高昂代价，会对传统中医药在疫情中的作用给予客观公正的评价。本丛刊的论文就是在英国及欧洲国家的几位中医教授王天俊，叶柳宗，孙培林对新冠肺炎诊治体会和经验，包括COVID-19相关性嗅觉和味觉丧失的中医药分析及对策；COVID-19相关性嗅觉和味觉丧失；案例研究和讨论，COVID-19早期症状等中医分析和治疗；针灸治疗COVID-19后心理和精神障碍的策略。

本刊还有关于中医治疗临床常见病不孕症等内容：有韩永刚博士的针灸治愈不孕症并自然怀孕；对“得气”和“气至”概念的拨乱反正；张青教授的针灸中药的辅助生殖技术治疗复杂性病例等论文。

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# TCM Analysis and Treatment of Early Symptoms of Covid-19

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## ABSTRACT

The novel coronavirus that causes coronavirus disease first broke out and was identified in Wuhan, China in late 2019. On 11 March 2020, based upon the fact that in a period of merely two weeks, the number of cases of Covid-19 outside China had increased 13-fold and the number of affected countries had tripled, WHO declared Covid-19 a pandemic.<sup>1</sup> However, sadly, no specific drugs are available to treat and prevent Covid-19 at this moment. There are some typical early symptoms, along with other less identifiable manifestations, red-flagging the presence of the illness. Early identification and management of these seemingly scattered early symptoms are extremely important in terms of controlling the spread and preventing further deterioration of Covid-19. Authors in this article attempt to explore the pathogenesis and mechanisms of these early symptoms and provide advice on relevant treatments from the viewpoint of TCM, illustrating that precise reading of all these early symptoms has significant importance in order to achieve successful TCM management in time.

**Keywords:** Coronavirus, SARS-CoV-2, Covid-19, pneumonia, TCM, early symptoms

The SARS-CoV-2 virus is a virus strain that causes severe acute respiratory syndrome. It is contagious in humans, and the World Health Organization (WHO) has designated the ongoing pandemic of Covid-19 a Public Health Emergency of International Concern and new outbreaks can emerge rapidly.<sup>2,3,4</sup>

In terms of the contagious capacity of SARS-CoV-2, Wölfel, R. et al. have done some scientific researches and pointed out that SARS took seven to ten days after onset until peak RNA concentrations (of up to  $5 \times 10^5$  copies per swab) were reached. In the present study, peak concentrations were reached before day 5, and were more than 1,000 times higher. Extended tissue tropism of SARS-CoV-2 with replication in the throat is strongly supported by the studies of sgRNA-transcribing cells in throat swab samples, particularly during the first five days of symptoms. Critically, the majority of patients in the present study seemed to be already beyond their shedding peak in upper respiratory tract samples when first tested, while shedding of infectious virus in sputum continued through the first week of symptoms. Based on the present findings, early discharge with ensuing home isolation could be chosen for patients who are beyond day 10 of symptoms

with less than 100,000 viral RNA copies per ml of sputum. These research results were published online in *Nature* on 1 April 2020.<sup>5</sup>

Although comprehensive testing is key to confirming coronavirus, and plays an important role in deciding on procedures of quarantine and treatment as early as possible, it is almost impossible for many countries to currently carry out this procedure thoroughly for various reasons. Iceland is the only exception as the government enables everyone in the country to be tested for the virus. The government says it spent years perfecting its approach.<sup>6</sup>

It therefore appears more important, in order to avoid spreading infection on a wider scale, to have full awareness of the early symptoms of Covid-19 infection in a more proactive and health monitoring sense, in addition to the common methods introduced by most countries like social distancing and self-isolating. Although most countries in the world apparently remain conservative about providing proper medical treatment of the infection in the early stages, identification and understanding of the early symptoms could determine how well the whole world copes with the outbreak and could help provide accurate information for healthcare and prevention strategies.

## Manifestations of early symptoms of Covid-19 infection

While the Covid-19 pandemic is still sweeping across the world, it has only been a time span of four months since it was first identified and announced to the public in December 2019 by China. We generally still have very little knowledge about the virus. It now becomes essential that by identifying the early symptoms of the infection and carrying out some immediate tailored treatment, in order to slow down the further progress of the infection or reduce the activity of the virus replication, the impact of the infection could be greatly reduced. Since the list of most commonly reported symptoms on Covid-19 patients across the world during this pandemic is still incomplete and ongoing, we searched through the published literature globally in an attempt to give TCM's in-depth insight into it.

The Covid-19 associated early symptoms coming into people's full attention still has a long way to go. Our study indicates that the relevant symptoms include not only the commonly recognised ones like fever and respiratory manifestations next to the major flu-related symptoms, but also some digestive and urological



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signs, apparent physical and mental fatigue, musculoskeletal pain or discomfort, as well as some other less identifiable symptoms like loss of taste and smell, skin rash, chilblain-like wounds and eye irritations, and different levels of nervous system impairments. Although there is a lack of an inner logical connection between each individual symptom in a Western context, these clinical manifestations have various underlining mechanisms in TCM.

Regarding the early symptoms, different countries have taken varying attitudes towards them. Symptoms of loss of smell and taste were added to the UK list of coronavirus symptoms only on 18 May, whereas previously the NHS website had cited only fever, cough and difficulty breathing as the key symptoms of Covid-19 infection and thus the trigger for NHS medical professionals to consider admission for tests and hospital treatments. This method had completely excluded all other mild symptoms in the early stages of the infection, which in our opinion, may greatly have contributed to the UK being among those having the highest Covid-19 casualties after the US, as of 18 May 2020.

In comparison, the US National Centre for Disease Control and Prevention (CDC), had emphasised those symptoms that appear 2-14 days after exposure to the virus including fever, cough, shortness of breath or difficulty breathing, chills, repeated shaking with chills, muscle pain, headache, sore throat, new loss of taste or smell.<sup>7</sup>

Medical researchers are taking a more systematic view over the complexity of the virus. Hussin A. Rothan summarised that the symptoms of Covid-19 infection appear after an incubation period of approximately 5.2 days. The period from the onset of Covid-19 symptoms to death ranged from 6 to 41 days with a median of 14 days.

It lists two groups of symptoms: 1. systematic disorders: fever, cough, fatigue, sputum production, headache, haemoptysis, acute cardiac injury, hypoxemia, dyspnoea, lymphopenia, diarrhoea; 2. respiratory disorders: rhinorrhoea, sneezing, sore throat, pneumonia, ground-glass opacities, RNAemia, acute respiratory distress syndrome. The article particularly pointed out that Covid-19 infection presented more symptoms of gastrointestinal symptoms like diarrhoea than other coronaviruses like SARS-CoV and MERS-CoV, and that the higher potential of digestive and urinary impact with Covid-19 infection needs attention.<sup>8</sup>

However, these are not adequate to cover all the symptoms especially in the very early stage of the infection, taking into account the intense battle over time against the progress of the virus. Following the development of the pandemic, there are more and more discoveries of potential signs and symptoms of the infection being reported across the world since its outbreak

globally. It is worth mentioning that some of these newly reported Covid-19 symptoms were not widely identified and reported in China. The reason for the difference between China and other countries is worth discussing in the future.

The *New York Times* reported that doctors from different countries of surging Covid-19 cases, including South Korea, Italy, Germany, UK and US, urged the awareness for doctors to screen for patients with symptoms of lost sense of smell and taste, with many cases following no noticeable nasal congestion. The percentage of the presence of anosmia among the Covid-19 positive patients is between 30-59 per cent according to different researches.<sup>9,10</sup> Loss of taste or smell appeared around 24-72 hours before more typical symptoms, such as fever.<sup>11</sup>

Some patients also reported rash-like frostbite or toes turning blue/purple in Italy and Spain and the Middle-East.<sup>12,13</sup> But the percentage of skin rash occurrence in Covid-19 positive patients presents a big difference between the studies of China and other countries, with Western countries much higher.<sup>14</sup>

Skin changes can be found throughout the whole process of Covid-19 infections. Magro et al. studied five cases of severe Covid-19 associated respiratory failure, of which three had purpuric skin rash, and pointed out the potential key role of microvascular injury and thrombosis in the pathogenesis of Covid-19.<sup>15</sup>

There were also reports of red and irritated eyes in some cases. Cheema and Aghazadeh et al. reported the first case of Covid-associated keratoconjunctivitis in North America, presenting with red eyes and watery eye discharge without any fever and respiratory symptoms.<sup>16</sup>

The damage and impact of Covid-19 on the nervous system and particularly the brain are also raising people's concern. There have been only a few scattered published articles on the relevant CNS (central nerve system) symptoms on Covid-19 cases, although signs like nausea, headache and vomiting are commonly recorded in patients. In a review, Asadi-Pooya and Simani quoted that about 25 per cent of the Covid-19 infected patients present CNS manifestations.<sup>17</sup> A study of 214 Covid-19 infected patients in China showed 36.4 per cent of them displayed neurological symptoms, including CNS manifestations like dizziness, headaches, impaired consciousness, acute cerebrovascular disease, ataxia, seizures, and peripheral manifestations like taste and smell impairment, vision impairment and nerve pain as well as skeletal muscle injury.<sup>18</sup> To add some more evidence between Covid-19 and CNS impairment, a team led by Dr Oxley in the Department of Neurosurgery, Mount Sinai Health System, New York, investigated five cases of large vessel stroke over a two-week period in Covid-19

patients under 50 years of age, with either no or mild Covid-19 symptoms. This represents a sevenfold increase in what would normally be expected.<sup>19</sup> This study implies Covid-19 may attack large vessels in a younger population to cause thrombosis and clotting at an early stage of the infection. However, it is still too early to conclude that Covid-19 leads to a higher risk of stroke in the early stage of the infection.<sup>20</sup>

All these reports from all over the world, from the view of Western medicine, reflect a broad variety of different clinical symptoms in different anatomic systems. Due to the limitation of the scale and quantity of observations by individual clinicians in different countries and regions, these symptoms do, however, represent some level of similarity and coincidence, although each symptom identified is still lacking strong supporting evidence in connection with a certain pathogenesis, in terms of when and why they show up in one patient but not in others. It will, therefore, be very salient if we can find a new viewing point from which to understand this disease.

#### TCM's mechanisms in the early symptoms of Covid-19 infection

In fact, TCM has a much more logical line of insight into these seemingly random and scattered manifestations and all these clinical manifestations have various and intersecting underlining mechanisms. TCM treatment is thus well documented based upon these understandings.

In general, when the EPF (external pathogenic factors) enter the body, they develop and progress following certain patterns, rarely involving multiple internal organs and channels at the same time. As a result, well trained TCM practitioners can easily and promptly identify these external symptoms and signs associated with the relevant patterns. However, when it comes to a pandemic EPF, even though it appears as an external invasion pattern at the start, the pathogenic factors can rapidly fall into multiple internal organ and system disorders, creating a mixture of complications involving multiple malfunctions, of which Covid-19 is a living example.

Coronavirus pneumonia at the beginning presents a typical pattern of Cold-Damp with evil toxin. Since it is a mixture of external pathogenic factors, sharing inevitably some features of external symptoms and signs, it lays a solid foundation for a treatment principle to dispel and eliminate the external evils.

In studying this disease, it is interesting to start with looking at the climate of Wuhan, when Covid-19 first broke out in December 2019. The local weather was very rainy and wet, however with a higher average temperature than records of previous winters, with not much lack of sunlight. Reviews of tongue images of patients with Covid-19 also show the similarity of a white and greasy

coating, with not so many showing a yellow, thick and greasy coating, confirming the presence of Cold and Damp, especially at the beginning of the infection.

Taking all the early symptoms listed above into consideration, TCM's understanding of the development of EPF invasion, provides a perfect insight into the infection. *Simple Questions* Chapter 63: 'when an evil settles in the physical appearance, it will first lodge in the skin and its hair. It stays there and does not leave. Then it enters more deeply and lodges in the tertiary vessels (*sun mai*). It stays there and does not leave. Then it enters further and lodges in the network vessels (*luo mai*). It stays there and does not leave. Then it enters further and lodges in the conduit vessels (*jing mai*, channels). It links up with the five depots (*wu zang*, internal *yin* organs) internally and spreads into the intestines and the stomach. With both the *yin* and the *yang* (regions/ channels) being affected, the five depots (*wu zang*, internal *yin* organs) will be harmed.'

This chapter provides a clear pathway of the mechanisms of evil EPF's invasion into the body:

1. EPF enter the body first in stage one via the skin and the cutaneous section to disturb the *wei-qi* level;
2. EPF secondly lodge in stage two, the channel and collateral vessel level. Because the cutaneous section belongs to the *jing luo* complex system, it is clear that stage one and two are both disorders of the channel system, a superficial level of disorder. Regarding invasion at these two early stages, if a tailored treatment to dispel and eliminate the EPF from the channel system can be applied promptly, it will cease or at least slow down the further development of the invasion, and this is the core of our emphasis on the early intervention for Covid-19 infections;
3. The invasion ends in stage three, after affecting the stomach and intestines. The invasion settles finally in the five *yin* organs (*wu zang*) and damage of the five *yin* organs (*wu zang*), leading to more severe systematic illness.

However, when considering its epidemic character, it is important to emphasise that Covid-19, although bearing the nature of external Cold-Damp factors, is not the same type of 'Cold' or 'flu' we encounter in everyday clinical practice. It occurs and progresses extremely fast, in an unusual, unpredictable, and hard to control pattern, involving much higher mortality than usual. Many patients with severe cases of infection could face death within 20 days from the start when the early symptoms appear. Therefore TCM calls it '*han shi yi* (寒湿疫)', the term *yi* (疫) means plague and epidemics. 'Evil toxin' is the name we give to describe another aspect of its pathogenesis. Due to the nature of the evil

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toxin mixed with Cold-Damp, *yi*, the plague, enters the body quickly, develops and changes rapidly. Sometimes it can even skip the first two stages and collapse into stage three within a very short period, affecting organs that present symptoms of a mixture of Cold-Damp and toxic Heat.

It becomes, in consequence, even more crucial that identifying and acknowledging the first two earliest stages and properly applying relevant tailored preventive intervention is the key to winning the battle in fighting this virus infective illness.

Based on the three *yang* and three *yin* channel system, Shang Han Lun's six-channel differentiation provides a great approach to analysing Covid-19 pathogenesis. Especially when we look at the early symptoms of it, differentiation of the three-*yang*-channel enables us to have a broader view to link together all those scattered symptoms at the early stage of infection. Three-*yang*-channel system represents the individual channels of six *yang* organs (*liu fu*), lying on the outer side of the body, which serve as the defending front line against external invasion. Illnesses of the three-*yang* channel system manifest two aspects of the disorders:

1. The symptoms on body parts and areas along the distribution of the relevant channels
2. The malfunction symptoms of the relevant *yang* organs.

The three-*yang*-channel system clearly draws a line on the process of external invasion between stage one, two and stage three within which the internal *yin* organs are affected and harmed. In other words, stage three represents the three-*yin*-channel system that is stated in *Shang Han Lun*.

In addition, invasion can attack a single one or a cluster of several channels, and the *yin yang* internal-external paired channels tend to have patterns with more direct interlapping influence on each other in the process of the epidemic infection, which happens very frequently with the Covid-19 pandemic. This all adds more complexity to the disease.

### **The six channel differentiations related to Covid-19 early stage symptoms**

#### ***Tai yang* channel syndrome**

Aversion to cold, slight fever, headache, runny nose, loss of smell, neck pain, muscle pain or stiffness of the muscles, dry cough, tickling throat, thin, white and greasy tongue coating, superficial and slippery pulse, etc.

In Covid-19 cases, we saw a lot of patients with forehead (close to Ex-*yin tang*) and top of head pain, and upper or middle back

pain often as the very early symptoms. Watery eyes and urinary dysfunction can be related to *tai yang* syndrome too.

#### ***Tai yang* and *yang ming* channel syndrome**

Alongside *tai yang*'s symptoms of slight aversion to cold, high fever, headache, neck pain, muscle pain, cough, carrying a mixed nature of Damp, Cold and toxic Heat, two aspects of symptoms can also present:

1. Dampness related vomit, diarrhoea of strong smell and fatigue;
2. Toxic Heat related fever, red face, restlessness, insomnia, constipation, yellow and dry coating, rapid and forceful pulse.

In Covid-19 cases, we saw patients with sudden loss of smell or taste, purple toes or chilblain patch starting on regions where stomach and large intestine meridians distribute. Because of the *yang ming-tai yin* Lung interconnection, it is common to see patients presenting skin rashes in the early stage, as well as blisters under the Damp category. It is worth mentioning that the further development of *yang ming* Heat from skin can invade into Blood, and may end in Kawasaki disease, in which inflammation of blood vessels and heart are widely involved (that is classified as a *shao yin* or *jue yin yin* depleted complication, as a later stage pattern).

#### ***Tai yang* and *shao yang* channel syndrome**

Alternate aversion to cold and fever, headache, neck pain, muscle pain or stiffness of the muscles, cough with fullness of chest, bitter taste in the mouth, poor appetite, depression, soreness and dryness in the throat, vomiting, ataxia, thin, yellow and greasy coating, wiry and slippery pulse. In Covid-19 cases, we often saw patients with neck and shoulder pains, temporal headaches with repetitive pattern of feverish tides, red eyes or eye irritations; disturbance and blockage energy in *shao yang* can cause chest tightness and palpitation too.

#### ***Tai yang*, *yang ming* and *shao yang* channel syndrome**

Aversion to cold, slight fever, headache, neck pain, muscle pain or stiffness of the muscles, cough, redness of the face, throat pain, bitter taste in the mouth, white and greasy coating, yellow and greasy coating, rapid and slippery pulse.

Obviously this is a combination of all the three *yang*-channel syndromes, usually an extensive development of the previous three patterns. We take this as the step prior to stage three, that red-flags the condition collapsing further.

As mentioned above, it is highly common to see *yin yang* complex patterns in Covid-19 patients in the early stage, as the evil EPF develop much faster. The most common combined *yin yang* patterns are listed below:

***Tai yang and tai yin channel syndrome***

Slight aversion to cold, little fever, headache, muscle pain, cough, throat pain, tiredness, fullness of abdomen with slight pain, lack of taste, poor appetite, looser stools, or diarrhoea usually of less odour, weakness of the muscle, pale tongue, white and greasy coating, thin, weak and slippery pulse, etc.

With Damp involvement and weakened *tai yin* Spleen, patients present much more noticeable fatigue with heaviness of body, Cold limbs, and stronger and longer-lasting loss of appetite, even anosmia.

***Tai yang and shao yin channel syndrome***

Aversion to cold, no fever, headache, cough, throat pain, Colder and purpler hands and feet, extreme tiredness, somnolence, weak heartbeat, semi-consciousness, pale coating, wet coating, thin, slow and weak pulse, etc.

With Cold involvement and weakened *shao yin* Kidney and Heart, patients present much more noticeable low spirit, lethargy and exhaustion, purple lips and palpitation with mild exertion. In addition, the involvement of toxic Heat can damage the *shao yin* channel and cause *yin* depletion too, featuring deep red skin rash or bleeding complications, but this is usually a later stage condition, which is not covered completely in this article. With this complex state, a critical condition will be expected to manifest soon. Therefore attention is urgently needed once this complex pattern is identified.

In addition to the six-channel differentiation by *Shang Han Lun*, *zang fu* differentiation may give more detailed analysis to the stage three development. It mainly involves the three organs: Lung, Spleen and Triple Heater at the beginning of Covid-19 infection.

Lung functions in maintaining respiration, dispersing and descending the Lung *qi*, opening into the nose, dominating the skin and regulating the Water passage. While Spleen has physiological functions in producing *qi* and Blood, transporting and transforming food and fluid, dominating the muscles and four limbs, opening into the mouth, harmonising with the Stomach, controlling the Blood circulation within the vessels. Triple Heater functions in harmonising the Three Heater, regulating the corridor of *yuan qi* and Water, distributing *qi* to all parts of the body. If the *qi* distribution and Water metabolism of the Triple Heater become disturbed or blocked, Water retention could happen, which leads to various dysfunctions throughout the whole body across the different *jiao(s)*. Considering the nature of pathogenesis of Covid-19, Damp, Cold and toxic Heat, closely in connection to the disorders of body fluid and Water metabolism, we find Lung,

Spleen and Triple Heater are the most essential organs to be often involved at the beginning of the infection. Cold-Damp pathogens may dominate the beginning stage of the illness leading to disturbance and blockage of Water metabolism, toxic Heat can then dominate a later stage that burns out the body fluid leading to severe *yin* depletion. However in many fast-progressing cases, the two factors often mingle together.

The Lung becomes impaired or blocked, involving:

- Disruption of its dispersing function  
Aversion to cold, or chilliness, slight fever, cough, and itching in the throat
- Failure of the Lung to open into the nose  
Loss of smell, stuffy nose, runny nose and nasal bleeding
- Dysfunction of the Lung in descending the *qi*  
Fast development of chest congestion, increasing pressure feeling in the chest, hypoxemia.
- Blockage of *wei qi*  
Muscle pain, joint pain, sweating and sensitivity to Wind
- Disruption of its role as the upper source of Water  
Rapid build-ups of fluid in the Lung, scanty urination and mild oedema.

Spleen

- Dysfunction of transportation and transformation  
Poor appetite, loss of taste of food, nausea, vomiting, formation of thin and white phlegm (mucus) in the mouth, bloating of abdomen, soft or loose stool, or diarrhoea, or signs of build-up of Damp in the body, including blisters on the feet or somewhere on the body
- Poor function of *qi* and Blood production  
Lassitude, fatigue, difficulty walking for a short distance, and pale complexion, and Cold hands and feet
- Lack of domination of the muscles and four limbs  
Muscle weakness and lack of force in the four limbs
- Failure of the Spleen in controlling the Blood  
Bruises and haemoptysis.

Triple Heater

- Disturbance of *yuan qi* distribution  
Tiredness, weakness, mentally fatigued lacking power to do things, in some cases even minor activities such as reading, writing, or moving for a very short distance, e.g. 20 metres, could become a challenging effort
- Blockage of the Water metabolism  
Rapid Water retention in the Lung, formation of Phlegm and mucus in the Lung, or fast build-up of general Water retention, or oedema on the lower limbs and scanty urination, or even heart palpitation, shortness of breath, fullness of abdomen, or constipation.



The prognosis of the infection depends on the patient's constitution, age and underlying sickness. The invasion of Cold-Damp, toxin and Heat may enter either Cold dominant or Heat dominant directions. The Cold dominant direction takes the system to excessive accumulation of mucus in the Lung and/or Kidney system resulting in ARDS (acute respiratory distress syndrome) or Heart and Kidney failure; the Heat dominant direction takes the system to the over-burning of multiple organs resulting in general cytokine storm and multiple organ failure. By us foreseeing the possible consequence of the development of relevant pathology, a proper intervention of herbal or acupuncture treatment, as early as we can, will be able to shorten the process of the illness and avoid the further progress into critical conditions. Unlike ordinary flu, Covid-19 has a much faster and higher chance of driving the whole system into extensive crisis. From this point of view, it is no doubt that promptly identifying the early stage symptoms and managing the original pathogen with proper intervention can prevent drastic system deterioration and reduce mortality rate.

### TCM's treatment of early symptoms of Covid-19 infection

The main and important focus of TCM treatment for the symptoms at an early stage of Covid-19 is to dispel the pathogenic factors, namely Cold-Damp and toxin Heat, restore the functions of Lung, Spleen and Triple Heater, and other relevant organs. We particularly want to emphasise here the application of Ghost points in acupuncture treatment. The idea of a combination of Ghost points, Lu 11 *shao shang* with Sp 1 *yin bai* comes from the ancient analogy that the evil epidemic EPF are acting as 'ghosts' into a human's body. We are also keen on the eight extraordinary Confluent points that have multidimensional actions on both the primary 12 channels and extraordinary vessels.

#### a. *Tai yang* channel syndrome

Principle of treatment

Dispel Cold-Damp, remove toxin, disperse the Lung *qi* and relieve external symptoms.

Herbal formula

*Jing Fang Bai Du San*, or *Qiang Huo Sheng Shi Tang*.

Herbal modifications

- > *Cang zhu* 10g, *huo xiang* 10g, *qing hao* 10g and *jin yin hua* 10g could be added into the formulas to strengthen the effect of eliminating Cold-Damp and Toxin.
- > In case of obvious dry cough, add *tian hua fen* 5g and *mai men dong* 10g to moisten the Lung and reduce dry cough.
- > In case of severe anhidrosis, add *ma huang* 10g and *gui zhi* 10g to promote sweating strongly and relieve the external symptoms.
- > In case of severe throat pain, add *she gan* 10g to relieve the throat pain.
- > In case of loss of smell, add *cang er zi* 10g and *xin yi hua* to open the nasal orifice and improve the smell.

- > In case of loss of taste, add *sha ren* 5g to eliminate Cold-Damp and improve the taste.

Acupuncture points

- Ghost points: Lu 11 *shao shang* and Sp 1 *yin bai*. Puncture superficially.
- Lu 7 *lie que* + Ki 6 *zhao hai*, TH 5 *wai guan* + GB 41 *zu lin qi* with even method.
- LI 4 *he gu*, GB 20 *feng chi*, TH 6 *zhi gou*, BL 13 *fei shu*, Ren 12 *zhong wan*, St 40 *feng long* and St 36 *zu san li* with reducing method.

Points modifications

- > In case of obvious dry cough, add Lu 8 *jing qu* to moisten the Lung and reduce dry cough.
- > In case of severe anhidrosis, add moxa on LI4 *he gu*, BL 13 *fei shu* and St 36 *zu san li* to promote sweating and relieve the external symptoms.
- > In case of muscle pain, add BL 58 *fei yang* and BL 60 *kun lun* to harmonise the collaterals and relieve the muscle pain.
- > In case of severe throat pain, add Ren 23 *lian quan* to relieve the throat pain.
- > In case of loss of smell, add LI 20 *ying xiang* and St 3 *ju liao* to open the nasal orifice and improve the smell.

#### b. *Tai yang* and *yang ming* channel syndrome

Principle of treatment

Clear Heat, remove toxin, disperse the Lung *qi* and clear the Heat.

Herbal formula

*Da Qing Long Tang*

Herbal modifications

- > *Cangzhu* 10g, *huo xiang* 10g, *qing hao* 10g and *jin yin hua* 10g could be added into the formulas to strengthen the effect of eliminating Cold-Damp and toxin.
- > In case of high fever, add *zhi mu* 10g and *huang qin* 10g to clear the Heat in the *yang ming* and reduce the fever.
- > In case of severe thirst, add *tian hua fen* 10g to benefit the body fluid and relieve the thirst.
- > In case of yellow phlegm, add *zhe bei mu* 10g and *niu bang zi* 10g to resolve Heat-Phlegm and reduce the cough.
- > In case of haemoptysis, add *bai ji* 10g and *xian he cao* 10g cool Blood and stop bleeding.
- > In case of constipation, add *da huang* 10g to clear the Heat and promote defecation to relieve the constipation.

Acupuncture points

- Ghost points: Lu 11 *shao shang* and Sp 1 *yin bai*. Puncture superficially.
- Lu 7 *lie que* + Ki 6 *zhao hai*, P 6 *nei guan* + Sp 4 *gong sun* with even method.

- Lu 5 *chi ze*, Bl 13 *fei shu*, Ren 17 *shan zhong*, Lu 10 *yu ji*, Li 4 *he gu*, Li 11 *qu chi*, St 25 *tian shu* and St 44 *nei ting* with reducing method.

#### Points modifications

- > In case of high fever, add Du 14 *da zhui* to clear the Heat and reduce fever.
- > In case of blocked nose and nasal bleeding, add Li 20 *ying xiang* to open the nasal orifice and stop the bleeding.
- > In case of loss of taste, add St 4 *di kang* to regulate the channel and harmonize the collateral to improve the tastes.
- > In case of skin red rashes or irritations (Heat oriented), add Sp 10 *xue hai* and Bl 17 *ge shu* to clear the Heat and eliminate Heat in the Blood.
- > In case of excessive yellow phlegm, add Ren 17 *shan zhong* to eliminate Phlegm and stop cough.
- > In case of haemoptysis, add Lu 6 *kong zui* to cool Blood and stop bleeding.

#### c. *Tai yang* and *shao yang* channel syndrome

##### Principle of treatment

Dispel Cold-Damp, remove toxin, disperse the Lung *qi* and harmonise *shao yang*.

##### Herbal formula

*Chai Hu Gui Zhi Tang*.

##### Herbal modifications

- > *Cang zhu* 10g, *huo xiang* 10g, *qing hao* 10g and *jin yin hua* 10g could be added into the formulas to strengthen the effect of eliminating Cold-Damp and toxin.
- > In case of redness of eyes or eye irritation, add *xia ku cao* 10g to clear the Heat in the Liver and relieve the eye complaints.
- > In case of severe vomiting, bitter taste in the mouth, add *xuan fu hua* 10g (packed with gauze) to descend the Stomach *qi* and relieve the vomiting.
- > In case of emotional depression, add *he huan pi* 10g to smooth the *qi* circulation and tranquillise the *shen*.
- > In case of ataxia, add *tian ma* 10g to subdue the Wind and improve the balance of the body.

##### Acupuncture points

- Ghost points: Lu 11 *shao shang* and Sp 1 *yin bai*. Puncturing superficially.
- Lu 7 *lie que* + Ki 6 *zhao hai*, TH 5 *wai guan* + GB 41 *zu lin qi*, P 6 *nei guan* + Sp 4 *gong sun* with even method.
- Lu 5 *chi ze*, Bl 13 *fei shu*, Lu 10 *yu ji*, GB 34 *yang ling quan*, GB 43 *xia xi* and Sp 6 *san yin jiao* with reducing method.

##### Points modifications

- > In case of much dry cough, add Lu 8 *jing qu* to moisten the Lung, disperse the Lung *qi* and relieve the dry cough.

- > In case of redness of eyes, or eye irritation, add TH 1 *guan chong* and Liv 2 *xing jian* to clear the Heat in the Liver and relieve the eye complaints.
- > In case of severe vomiting, bitter taste in the mouth, add GB 40 *qiu xu* and Ren 12 *zhong wan* to descend the Stomach *qi* and relieve the vomiting.
- > In case of emotional depression, add Liv 14 *qi men* and Ht 3 *shao hai* to smooth the *qi* circulation, tranquillise the *shen*.
- > In case of chest tightness or pressure over the chest, add Ren 17 *shan zhong* and P 4 *xi men* to descend the *qi*, regulate the chest and relieve the chest tightness and pressure.

#### d. *Tai yang*, *yang ming* and *shao yang* channel syndrome

##### Principle of treatment

Dispel Cold-Damp, remove toxin, clear Heat, disperse the Lung *qi* and harmonise *shao yang*.

##### Herbal formula

*Chai Ge Jie Ji Tang*.

This pattern is mostly seen in the clinic or practice. After launching the 'Screening Study of Effective Prescriptions of Traditional Chinese Medicine for the Prevention and Treatment of New Coronavirus Pneumonia' in Shanxi, Hebei, Heilongjiang and Shaanxi with a very effective therapeutic result, the State Administration of Traditional Chinese Medicine in China has encouraged applying a herbal formula named *Qing Fei Pai Du Tang* (Lung Cleansing & Detoxifying Decoction) to treat patients with Covid-19 pneumonia.

*Qing Fei Pai Du Tang* is a new compound formula composed of four classic prescriptions, containing pungent and Warm, pungent and Cold, and light and fragrant herbs to disperse the Lung, stop cough, clear Heat, resolve Damp and remove toxin. It contains:

<i>ma huang</i> (Ephedrae Herba)	9g
<i>xing ren</i> (Armeniacae Semen)	9g
<i>shi gao</i> (Gypsum fibrosum)	30g
<i>zhi gan cao</i> (prepared Glycyrrhizae Radix)	6g
<i>gui zhi</i> (Cinnamomi Ramulus)	9g
<i>ze xie</i> (Alismatis Rhizoma)	9g
<i>zhu ling</i> (Polyporus)	9g
<i>bai zhu</i> (Atractylodis macrocephalae Rhizoma)	9g
<i>fu ling</i> (Poria)	15g
<i>chai hu</i> (Bupleuri Radix)	16g
<i>huang qin</i> (Scutellariae Radix)	6g
<i>zhi ban xia</i> (Pinelliae Rhizoma preparatum)	9g
<i>sheng jiang</i> (Zingiberis Rhizoma recens)	9g
<i>zi wan</i> (Asteris Radix)	9g
<i>kuan dong hua</i> (Farfarae Flos)	9g
<i>she gan</i> (Belamcandae Rhizoma)	9g

<i>xi xin</i> (Asari Radix et Rhizoma)	6g
<i>huo xiang</i> (Pogostemonis Herba)	9g
<i>shan yao</i> (Dioscoreae Rhizoma)	12g
<i>zhi shi</i> (Aurantii Fructus immaturus)	6g
<i>chen pi</i> (Citri reticulatae Pericarpium)	6g

#### Directions

- Decoct one package of crude herbs each day and take the decoction once in the morning and once in the evening (40 minutes after a meal). If conditions permit, take half a bowl of rice soup after drinking the decoction.
- Three days of treatment constitutes one course. Usually only one or two courses of treatment are required.
- If the patient does not have a high fever, the amount of *shi tao* can be reduced, conversely, if the fever is high the amount of *shi gao* should be increased.

#### Acupuncture points

- Ghost points: Lu 11 *shao shang* and Sp 1 *yin bai*. Puncture superficially.
- Lu 7 *lie que* + Ki 6 *zhao hai*, P 6 *nei guan* + Sp 4 *gong sun* with even method.
- Lu 5 *chi ze*, Bl 13 *fei shu*, Lu 10 *yu ji*, Li 4 *he gu*, Li 11 *qu chi*, GB 20 *feng chi*, GB 34 *yang ling quan* and St 44 *nei ting* with reducing method.

#### Points modifications

Selections are as above patterns.

### e. *Tai yang* and *tai yin* channel syndrome

#### Principle of treatment

Dispel Cold-Damp, remove toxin, disperse the Lung *qi* and strengthen the *tai yin*.

#### Herbal formula

*Huo Xiang Zheng Qi San*, or *Ge Gen Jia Ban Xia Tang*.

#### Herbal modifications

- > *Cang zhu* 10g, *qing hao* 10g and *jin yin hua* 10g could be added into the formulas to strengthen the effect of eliminating Cold-Damp and toxin.
- > In case of loss of taste, add *sha ren* 5g to eliminate Cold-Damp and improve the taste.
- > In case of severe diarrhoea, add *ge gen* 10g to ascend the clear-*qi* and descend the turbid-*qi*.
- > In case of severe tiredness, add *shan yao* 10g to activate the Spleen and tonify Spleen *qi* to improve the energy.
- > In case of bruises and haemoptysis, add *xian he cao* 10g and *bai ji* 10g to stop bleeding.
- > In case of frostbite/chilblain (Cold oriented), add *bai jie zi* 10g to *rou gui* 3g and *bai jie zi* 10g to warm the channels and eliminate blockage in the collaterals.

#### Acupuncture points

- Ghost points: Lu 11 *shao shang*, Sp 1 *yin bai*. Puncture superficially.
- TH 5 *wai guan* + GB 41 *zu lin qi*, P 6 *nei guan* + Sp 4 *gong sun* with even method.
- TH 6 *zhi gou*, P 6 *nei guan*, Bl 13 *fei shu*, GB 34 *yang ling quan*, Ren 12 *zhong wan*, St 40 *feng long*, St 25 *tian shu*, Sp 9 *yin ling quan*, St 36 *zu san li* with even method. Moxa on St 36 *zu san li*.

#### Points modifications

- > In case of severe fatigue, add Bl 20 *pi shu* and Ren 6 *qi hai* with moxa to activate the Spleen and tonify Spleen *qi* to improve the energy.
- > In case of loss of taste, add St 4 *di cang* and St 42 *chong yang* to regulate the channel and harmonize the collateral to improve the tastes.
- > In case of severe diarrhoea, add St 37 *shang ju xu* to stop diarrhoea.
- > In case of loss of appetite, add Sp 3 *tai bai* to activate the Spleen and improve the appetite.
- > In case of excessive mucus in the mouth, add Ren 22 *tian tu* to descend the *qi* and relieve the mucus.
- > In case of frostbite/chilblain (Cold oriented): moxa on *jing* Well points of nearest relevant meridians or the tip of the nearest toe.
- > In case of skin blisters, add Lu 9 *tai yuan* and Sp 3 *tai bai* to eliminate Cold-Damp in skin and muscle and relieve the skin blisters.

### f. *Tai yang* and *shao yin* channel syndrome

#### Principle of treatment

Dispel Cold-Damp, remove toxin, disperse the Lung *qi* and tonify the *shao yin*.

#### Herbal formula

*Ma Huang Fu Zi Xi Xin Tang*, or *Ma Huang Fu Zi Gan Jiang Tang*.

#### Herbal modifications

- > *Cang zhu* 10g, *huo xiang* 10g and *qing hao* 10g could be added into the formulas to strengthen the effect of eliminating Cold-Damp and relieve the external symptoms.
- > In case of weak heartbeat, add *gui zhi* 10g and *zhi gan cao* 10g to warm the Heart and strengthen the heartbeat.
- > In case of scanty urination, or oedema on the lower limbs, add *fu ling* 15g, *zhu ling* 10g and *ze xie* 10g to promote urination and relieve oedema.
- > In case of semi-consciousness, combination of Chinese herbs and Western medicine should be applied.

#### Acupuncture points

- Ghost points: Lu 11 *shao shang*, Sp 1 *yin bai*. Puncture superficially.
- Lu 7 *lie que* + Ki 6 *zhao hai*, P 6 *nei guan* + Sp 4 *gong sun* with even method.

- LI 4 *he gu* and BL 13 *fei shu* with reducing method;  
BL 15 *xin shu*, BL 23 *shen shu*, Ren 6 *qi hai*, Ren 4 *guan yuan*,  
KI 3 *tai xi* and St 36 *zu san li* with tonifying method with moxa  
on KI 3 *tai xi*, Ren 4 *guan yuan* and Ren 6 *qi hai*.

#### Points modifications

- > In case of weak heartbeat, add BL 15 *xin shu* with moxa to warm the Heart and strengthen the heartbeat.
- > In case of scanty urination, or oedema on the lower limbs, add St 29 *shui dao* and Sp 9 *yin ling quan* to promote urination and relieve oedema.
- > In case of semi-consciousness, Ht 8 *shao fu* and KI 1 *yong quan* with tonic method could be applied.
- > In case of hypoxaemia with difficulty inhaling, add KI 10 *ying gu* and Ren 17 *shan zhong* to tonify the *qi*, relax the chest and improve inhalation.

#### CONCLUSION

In this article, we set our foot on the path of understanding the early stage of Covid-19 infections. By analysing the early symptoms of the infection from a systematic TCM point of view, we are able to obtain a comprehensive reading of the relevant pathogenesis and pathology of it and give our suggestions on the relevant treatments. We are convinced a proper early intervention of correct differential treatments strictly under TCM principles can play a very important role in controlling the infection and reducing mortality. TCM's early intervention should not be underestimated and neglected in the current pandemic situation.

#### TEXT REFERENCES

1. <https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>
2. WHO Director-General's opening remarks at the media briefing on Covid-19 - 11 March 2020. World Health Organization (WHO) (Press release). 11 March 2020. Archived from the original on 11 March 2020. Retrieved 12 March 2020.
3. Wee, S.L., McNeil Jr, D.G., Hernandez, J.C. (30 January 2020). "W.H.O. Declares Global Emergency as Wuhan Coronavirus Spreads". *The New York Times*. Archived from the original on 30 January 2020. Retrieved 30 January 2020.
4. Chan, J.F., Yuan, S., Kok, K.H., To, K.K., Chu, H., Yang, J. et al. (February 2020). "A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster". *The Lancet*. 395 (10223): 514–523. doi:10.1016/S0140-6736(20)30154-9. PMC 7159286. PMID 31986261
5. [https://www.nature.com/articles/s41586-020-2196-x\\_reference.pdf](https://www.nature.com/articles/s41586-020-2196-x_reference.pdf)
6. <https://www.msn.com/en-au/news/coronavirus/iceland-is-allowing-everyone-in-the-country-to-be-tested-for-the-coronavirus-the-government-says-it-spent-years-perfecting-its-approach/ar-BB125S0J>
7. <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>
8. Hussin, A. Rothan, and Siddappa, N. Byrareddy. The epidemiology and pathogenesis of coronavirus disease (Covid-19) outbreak. *Journal of Autoimmunity*. 2020 May; 109: 102433. Published online 2020 Feb 26. doi: 10.1016/j.jaut.2020.102433
9. [https://www.nytimes.com/2020/03/22/health/coronavirus-symptoms-smell-taste.html?\\_ga=2.188496424.1813510712.1587638610-1648265835.1587638610](https://www.nytimes.com/2020/03/22/health/coronavirus-symptoms-smell-taste.html?_ga=2.188496424.1813510712.1587638610-1648265835.1587638610)
10. Menni, C., Valdes, A., Freydin, M.B., et al. Loss of smell and taste in combination with other symptoms is a strong predictor of Covid-19 infection. MedRxiv doi: <https://doi.org/10.1101/2020.04.05.20048421>

11. Vaira, L. A., Salzano, G., Deiana, G., & De Riu, G. (2020). Anosmia and ageusia: common findings in Covid-19 patients. *The Laryngoscope*. doi:10.1002/lary.2869
12. Fernandez-Nieto, D., Ortega-Quijano, D. et al. Comment on: Cutaneous manifestations in Covid-19: a first perspective. Safety concerns of clinical images and skin biopsies. *J Eur Acad Dermatol Venereol*. 2020 Apr 15. doi: 10.1111/jdv.16470. [Epub ahead of print]
13. Alramthan, A., Aldaraji, W. et al. A case of Covid-19 presenting in clinical picture resembling chilblains disease. First report from the Middle East. *Clinical and Experimental Dermatology*, 2020 Apr 17. doi: 10.1111/ced.14243. [Epub ahead of print]
14. Mahé, A., Birkel, E. et al. A distinctive skin rash associated with Coronavirus Disease 2019. *Journal of the European Academy of Dermatology and Venereology*. 2020 Apr 15. doi: 10.1111/jdv.16471. [Epub ahead of print]
15. Magro, C., Mulvey, J.J. et al. Complement associated microvascular injury and thrombosis in the pathogenesis of severe Covid-19 infection: A report of five cases. *Translational Research: The Journal of Laboratory and Clinical Medicine*. 2020 Apr 15. pii: S1931-5244(20)30070-0. doi: 10.1016/j.trsl.2020.04.007. [Epub ahead of print]
16. Cheema, M., Aghazadeh, H. et al. Keratoconjunctivitis as the initial medical presentation of the novel coronavirus disease 2019 (Covid-19). *Canadian Journal of Ophthalmology*. 2020 Apr 2. pii: S0008-4182(20)30305-7. doi: 10.1016/j.jco.2020.03.003. [Epub ahead of print]
17. Asadi-Pooya, A.A. & Simani, L. Central nervous system manifestations of Covid-19: A systematic review. *Journal of the Neurological Sciences* 2020 Apr 11;413:116832. doi: 10.1016/j.jns.2020.116832. [Epub ahead of print]
18. Roe, K. Explanation for Covid-19 infection neurological damage and reactivations. *Transboundary and Emerging Diseases* 2020 Apr 22. doi: 10.1111/tbed.13594. [Epub ahead of print]

19. <https://www.nejm.org/doi/full/10.1056/NEJMc2009787>
20. [http://www.xinhuanet.com/2020-01/28/c\\_1125508711.htm](http://www.xinhuanet.com/2020-01/28/c_1125508711.htm)

# TCM analysis and strategy for COVID-19 associated loss of smell and taste

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## Abstract

Coronavirus disease 2019 (COVID-19) is caused by SARS-CoV2 and is still not yet under complete control and no cure is available until this moment. It is still unpredictable to expect vaccination available worldwide in the near future. Early diagnosis hence becomes extremely important. Various papers have proven that early identification of loss of smell and taste is of significance in the diagnosis of this disease. Some patients of COVID-19 may carry on suffering from loss of smell and taste even long after the other symptoms of the infection subside. The aetiology, pathology, and mechanism of loss of smell and taste are discussed in this article, pointing out that impairment of meridians, disturbed Brain-Shen and dysfunction of the Zang-Fu organs are the key pathology of loss of smell and taste by COVID-19. Traditional Chinese medicine resolution with acupuncture and Chinese herbs are therefore demonstrated accordingly, aiming to establish some practical and effective strategies to deal with loss of smell and taste. This unique presentation in the treatment illustrate that even though loss of smell and taste being a single symptom, it requires a profound understanding on the complicated and sophisticated background mechanism of the COVID-19, which is urgently in need of comprehensive treatment in time. Loss of smell and taste by COVID-19 is not only a minor suffering of the infection, but also a very critical part of a fully recovery of COVID-19, it shall not be left untreated.

**KEYWORDS:** SARS-CoV2, COVID-19, loss of smell, loss of taste, acupuncture, Chinese herbs

## Background

Coronavirus disease 2019 (COVID-19) is a newly discovered respiratory diseases caused by coronavirus infection. Since the outbreak at the end of 2019, over 10,421,494 cases were confirmed and 508,419 people have lost their lives worldwide (as of 30th June 2020) <sup>[1]</sup>. Generally recognized, this disease presents in the early stage, with main symptoms that are commonly seen on other flu-like illnesses, such as fever, continuous cough, running or blocked nose and sore throat et al. Being the first country with it mass outbreak of COVID-19, China has gathered most experiences of the disease and has published several editions of national guidelines on diagnosis and treatment. The latest edition, published on 3rd March 2020 by the National Health Commission & State Administration of Traditional Chinese Medicine, states that the main manifestations in early stage include fever, fatigue and dry cough, nasal congestion, runny nose, sore throat, et al. (Diagnosis and Treatment Protocol for Novel Coronavirus Pneumonia, Trial version 7, accessed 30th June 2020) <sup>[2]</sup>. However when COVID-19 starts its global journey from Italy in Europe in March 2020, the loss or change in sense of smell and/or taste, among all the other early symptoms and signs of the infection, is raising more and more awareness as one of the unique early symptoms of the COVID-19 infection. The UK government was the latest one to recognize this, the loss or change of taste and/or smell was added onto the renewed guideline for diagnosis of COVID-19 on 18th May 2020 <sup>[3]</sup>. In comparison, the USA centers for disease control and prevention already did so early in April <sup>[4]</sup>. Therefore, from the difference of response among different populations, we can see the understanding of loss of smell and taste (LST) is a new task to both western and Chinese medicine.

**Western medicine understanding on loss of smell and taste due by COVID-19**



The first clinical study to mention LST related to COVID-19 was from China on late February 2020, in which Mao and colleagues reported a retrospective study to analysis 214 conformed hospitalised COVID-19 patients<sup>[5]</sup>. Among them, 36.4% of the patients (78 cases) recorded with neurological conditions. In particular, 5.1% (11 patients) reported hyposmia and 5.6% (12 patients) complained of hypogeusia. Compared with other classic major symptoms, fever (61.7), cough (50%), LST was much lower, which didn't catch the notice of other clinicians or researchers and hence did not obtained special attention on the government guidelines in China. Shortly after, a study from Italy indicated there were 33.9% (20) of 59 hospitalised patients who were COVID-19 positive reported taste disorders<sup>[6]</sup>. The systematic review and meta-analysis reported the prevalence of olfactory dysfunction was 52.73% (1,627 cases) and gustatory dysfunction 43.93% (1,390 cases). They concluded that Olfactory and gustatory dysfunction are common symptoms in patients with COVID-19 and may represent early symptoms in the clinical course of infection<sup>[7]</sup>. Significance of increased awareness of these signs and symptoms is to encourage earlier diagnosis and treatment, as well as to heighten vigilance for viral transmission. A recently large sample and multi-centre clinical study in Europe has found more than 85% of the laboratory-confirmed COVID-19 patients reported olfactory and gustatory dysfunctions, 85.6% and 88.0% respectively<sup>[8]</sup>. For investigating the relationship between the anosmia and dysgeusia with COVID-19 infection, American Academy of Otolaryngology-Head and Neck Surgery developed the COVID-19 Anosmia Reporting Tool for Clinicians. The initial findings revealed that anosmia was noted in 73% of patients (out of 237 entries) prior to COVID-19 diagnosis. It is suggested that anosmia may be critical in timely identification of individuals infected with SARS-CoV2 who may be unwittingly transmitting the virus<sup>[9]</sup>. Spinato and colleagues reported on JAMA 26th May 2020 that 64.6% of patients had altered sense of smell or taste, which is higher than two typical symptoms, dry or productive cough (60.4%) and fever (55.5%)<sup>[10]</sup>. Another slightly earlier study from the UK, investigated whether LST is specific to COVID-19 in 2,618,862 individuals who used an app-based symptom tracker<sup>[11]</sup>. Among the 18,401

who had undergone a coronavirus test, the proportion of participants who reported LST was higher in those with a positive test result (4,668 of 7,178 individuals; 65.03%) than in those with a negative test result (2,436 of 11,223 participants; 21.71%). Based on the study, the team published in *The Lancet* in early June "Quantifying additional COVID-19 symptoms will save lives" which indicates that predictive ability of LST can be higher than fever or persistent cough<sup>[12]</sup>. In terms of the age, the mean age of sufferers is 36.9 (11.4)<sup>[8]</sup>, 41.25 (12.18)<sup>[11]</sup> and 52.7 (15.5)<sup>[5]</sup>. The percentage of female sufferers is higher than men, at 59.3%, 63.1%<sup>[8]</sup> and 71.88 %<sup>[11]</sup>. These figures indicate the middle-age and female are more prone to LST in association with SARS-CoV2 infection. Although increasing evidences have highlighted the LST could be the strongest predictor for COVID-19 infection<sup>[12]</sup>, the patho-physiological mechanism underlying these symptoms is not clear<sup>[13, 14]</sup>.

There are some reports show an abundance of nasal epithelial cells expressing cellular receptors and proteases needed for viral entry, i.e. angiotensin-converting enzyme 2 (ACE-2) and transmembrane serine protease 2. One of the most reliable hypotheses lay the importance of the interaction of SARS-CoV2 with the ACE-2 and TMPRSS2 proteases, expressed in the oral mucosa and olfactory cavity, that facilitate SARS-CoV-2 binding, replication, and accumulation<sup>[13]</sup>. Based on the hypotheses, drugs potentially to modulate the expression and activity of ACE-2, Angiotensin-converting enzyme inhibitors and angiotensin II receptor blockers such as captopril, are advised to be considered on the management of LST<sup>[13]</sup>. It was also reported that up to 88% of patients developed anosmia or ageusia, thought to be secondary to invasion of the olfactory bulb by the virus, suggesting brain involvement<sup>[15]</sup>. LST does not only appear briefly, it is worthwhile to mention, many patients may live with the symptom for an unpredictable longer period. Even after 3 months since Prince Charles came out of the major symptoms of COVID-19, he is still having the "loss of smell and taste and, sort of, still felt he's still got it now"<sup>[16]</sup>. Therefore, LST by COVID-19 is not only a minor suffering of the infection, but also a very critical part of a fully recovery of COVID-19, it affects people's living quality and shall not be left unattended.

## **Traditional Chinese medicine understanding of loss of smell and taste by COVID-19**

Although the actual mechanism of LST in western medicine is not yet clear, traditional Chinese medicine (TCM) thorough logic analysis of pathology over the whole process of SARS-CoV2 infection can provide a good interpretation as well as reliable resolution on treatment of LST. COVID-19 is believed in TCM to be mainly the invasion by an epidemic evil bearing nature of Cold-Damp, with Toxin into the body, especially at early mild stages. TCM sees the symptoms of LST as a key part of the SARS-CoV2 infection, an exogenous illness. Although it follows the same pattern of normal exogenic pathogenic factors (EPFs), it also has its own pandemic characters, featuring acute onset, dramatic progress in an unexpect speed, skipping or overlapping different stages at the same time so to cause much higher complexity and mortality than other ordinary exogenous diseases.

### **Dysfunction of meridians**

According to the contexts written in various chapters throughout Huang Di Nei Jing (an ancient Chinese medical book that has been treated as the fundamental doctrinal source for Chinese medicine for more than two millennia), it is believed that, when EPF invades the body, the first stage of its process is to hit the skin-cutaneous section; if not resolved by the system, it then travels deeper into the collaterals and then channels; furthermore it then enters deeper and finally settles in the Zang-Fu organs. The invasion of EPFs follows the sequence: SKin-cutaneous section-collaterals-3Yang channels-Stomach and Large Intestine-5 Yin channels and organs. It is generally accepted that the exterior patterns of any illness are on the level between the skin-cutaneous sections and meridians. Because the skin-cutaneous sections, collaterals are all meridian oriented sub-systems, Therefore, the early stage of the COVID-19 infection can all be identified according to the allocation of each individual Yang meridians. At this stage while COVID-19 is moving on its way, there is yet not any symptoms of internal Zang-Fu organs, like with the Lung, of cough or shortness of breath, LST could be one of the early alarming sign, implying the potential for immediate medical care and procedure of preventative methods including home isolation, etc. Ignoring these symptoms could

be involved and sometimes, several meridians could be affected at the same time as shown on Table 1. Therefore dealing with the modulation on Yang meridian systems is a beneficial strategy for treating LST. Once the EPFs enter the Yin channels it then directly affect and impair the Yin organs, such as Lung and Spleen in particular related to LST. we will have the relevant discussion in the section on internal organ impairment.

### **Disturbance to the Brain-Shen**

The Brain, one of the six extraordinary organs, is also called the “sea of marrow”. It states in Huang Di Nei Jing - Ling Shu (Spiritual Pivot), “the Brain is the sea of marrow, its stretches up to the top of the head, and to the point of Fengfu (GV16)”. In chapter 28 of Ling Shu, it also says, “when the up-going Qi is insufficient, the Brain is not filled, so suffer the ears from hearing noises, and suffers the head from being bent, and dizzy is the eye vision”. Due to the close connection of Bladder meridian with Du Mai and the Kidney that feeds directly into the Brain, COVID-19 progressing in Bladder meridian may rapidly fall into the Brain via the connection of Du Mai, Ren Mai, Chong Mai, and Kidney meridian in a rather early stage.

The Brain is the place of Shen’s (spirit) activity, which controls memory, concentration, sight, hearing, and smell. As the Pi Wei Lun (Discussion on Stomach and Spleen) by Dong-Yuan Li (1249 C.E.) states, “sense of sight, hearing, smelling, touch, and intelligence ll depend on the brain”. Qing-Ren Wang in Qing Dynasty said in his book, Yi Lin Gai Cuo (Correcting the errors in the forest of medicine, an ancient Chinese medical book written by Qing-Ren Wang in 1830 C.E.), “the nose communicates with the brain and therefore smell depends on the brain.”<sup>[17]</sup>. Similarly, Shi-Zhen Li in “Ben Cao Gang Mu - Xinyi (Flos Magnoliae) says, “the nose is through the heaven and the heaven is the head.” Hence, it is clear in TCM that the Brain is in connection to the senses of sight, hearing, smell and taste. Being an extraordinary organ, Brain nowadays is believed to be the organ to control sight, hearing, smell and taste, and it is also closely interacting with the Zang organs, particularly the Heart and the Kidney in TCM context. A development of Brain’s dysfunction is usually a combination of impairment of Brain at its structure along with disruption of internal organs.

From the vast clinical researches on the COVID-19 infected patients, we now believe impairment of brain, encephalopathy, did happen at a comparatively earlier stage of the infection and may persevere throughout the later and recovery stage. Sufferers reported lack of concentration, poor memory, stress, insomnia, delayed recovery of LST, etc. LST may be a result of impairment of relevant meridians at the beginning of COVID-19 infection, but once the damages progress into brain level, a dedicated treatment for recovering brain's function in TCM is critical for the recovery of LST. However, the quality and speed of the brain recovery also depend on the repair and healing of its relevant Zang-Fu organs.

In addition, to maintain a good function of the Brain, Spleen-Qi (vital energy) needs to rise to the head to nourish the upper orifices, such as eyes, nose, ears, tongue and mouth. Sufficient Spleen-Qi rise upwards to carry the clear-Yang to irrigate the senses. As "Huang Di Nei Jing - Su Wen (Simple Questions) states, "the Clear-Yang is heaven", "the Clear-Yang exits through the upper orifices"<sup>[18]</sup>, "the Clear-Yang is effused through the interstice structures"<sup>[18]</sup>, "the Clear-Yang (Qi) can be effused through them", "the Clear-Yang transforms to Qi and rises to constitute heaven"<sup>[18]</sup>." If the Clear-Yang is strong and healthy, the senses of seeing, smelling, hearing and tasting would be acute and clear. Any disorders of ascending, descending, entering and

**Table 1 The impact meridians with loss of smell and taste**

Meridian	Distribution	Loss of smell and/or taste	Other symptoms
Foot Taiyang Bladder	Starts at the inner corner of both eyes close to the root of nose and frontal sinus, neck, back, leg foot, etc.	nose, running clear nasal discharges as well as the impaired sense of smell.	Headache between eye-brow, pain on top of head, neck and back pain, cold and tightness of back, legs, disorders of urine function.
Hand Yangming Large Intestine	End on the side of nose wings, close to sphenoid sinus.	Loss of smell and taste.	Diarrhoea, pain across front of neck, abdominal pains, or possible constipation.
Foot Yangming Stomach	Starts on the side of nose wings, close to sphenoid sinus.	Loss of smell and taste.	Pain across forehead, jaw and front of neck, loss of appetite, stomach and abdominal pains.
Yangqiao Mai	Start from the Shenmai (BL62) of the Taiyang meridian of the lateral heel and run up the back of the lateral malleolus and up to along the posterolateral side of the chest, through the shoulder and lateral neck, finally the corner of the mouth, nose to reach the inner corner of the eye.	Loss of smell and taste.	Stiffness of the body at the lateral aspect.
Lung, Heart, Spleen, Kidney, Liver, Du Mai, Ren Mai, as well as Chong Mai, etc.		Direct or indirect connection with smell and taste.	

exiting, of Spleen-Qi, blocked by Cold-Damp, the Clear-Yang will not be lifted towards the head, and these may result in impaired senses, including smell and taste.

### **Impairment of Zang-Fu organs**

Invasion of Cold-Damp with Toxin into the meridians always ends in internal Zang-Fu organs, especially in the case of COVID-19. It initially could impair the Lung, Spleen and Sanjiao via meridians, but quickly could fall in further to damage the Heart (pericardium), Liver and Kidney, especially at the severe and critical stage. Therefore, Zang-Fu organs' dysfunction is an unavoidable procedure in tackling the recovery of COVID-19.

The sensing ability to smell and taste are all depending on the smooth ascending, descending, entering and exiting of Qi. If Qi is obstructed or disrupted, these senses will not be functioning properly. Since the nose is the opening to the Lung, TCM stresses the importance of the Lung in terms of smell, which means if Lung-Qi is healthy and strong the nose will be open properly and the sense of smell will be normal and accurate. If Lung-Qi is disrupted the sense of smell may be weak or impaired. The mouth is the opening orifice to the Spleen, and the tongue is the opening orifice to the Heart. If the Qi of the Spleen and Heart are strong, the sense of taste will be normal and acute. If the Qi of the Spleen or Heart is disrupted, the sense of taste may be weak or impaired.

Although each sense of body is mainly allocated to a certain Zang-Fu organ, i.e. vision to the Liver, taste to the Spleen and Heart, smell to the Lung and hearing to the Kidney, TCM also holds that these internal Zang-Fu organs are mutually connected and influenced through meridians systems and Mother-Child 5 element relationships. Moreover, the physiological function of the Heart plays a key role in the sense's function, for instance, Huang Di Nei Jing - Su Wen says, "When the five Qi enter the nose, they are stored by Heart and Lung. When Heart and Lung have a disease, the nose is not free as a result <sup>[18]</sup>." This text implies the relation between the function of nose and Lung as well as Heart.

### **Traditional Chinese medicine treatment for loss of smell and taste**

The olfactory nerve is the nerve fibre that passes through the ethmoid epithelium to the olfactory bulb. The olfactory ability is the characteristic of the olfactory cells in the nasal mucosa. Injury of the nasal mucosa, olfactory bulb, olfactory filaments or central nervous system connection may affect the olfactory sense, clinically featuring loss of sense of smell, inversion of sense of smell, or phantom smell. Taste is transmitted by taste buds densely spread on the tongue, called taste bud cells, and then excited by the taste centre of the cerebral cortex, and the entire taste analysis activity is completed by the feedback loop of the neuro-humoral system. Therefore a tailored treatment to help reduce the inflammatory reaction caused by cytokine attacks on the nasal mucosal epithelium or taste buds on the tongue as well as nerve centres in the Brain can be a great approach to revert or reduce the symptoms of LST from a view of western medicine.

It is hence sensible to develop a TCM strategy for protection and repair on the nasal, lingual and CNS impairment by COVID-19 infection. In TCM terms, it is to eliminate the pathogenic factors, modulate the blockage of relevant meridians and to recover the function of internal organs. In addition, methods to revive the Shen and re-open the Clear orifices should be included. Early relevant involvement of TCM treatment shall be able to play an important role in the success of the LST recovery. However, TCM treatment for LST shall be strictly differentiation oriented, which means symptom-based treatment limited only to LST will fail to achieve sufficient result at a higher expectation. We recommend TCM treatment for LST by COVID-19 shall follow these strategies:

### **Regulation of internal Zang-Fu organs**

LST, mild or severe, is one of the early chief alarming symptoms and signs of COVID-19 in the beginning stage. These early symptoms may appear separately or in combination, with or without symptoms involving the Lung, Spleen and Sanjiao. As the infection deteriorates, the relevant symptoms could take place and even evolve into more severe conditions with involvement of Liver, Heart, and Kidney, etc in those severe and critical cases. On the other hand, while the infection is successfully managed, the body may then enter the recovery stage. In either of the situation, however, Loss of smell and



aste, along with other pronounced post-stage symptoms including exhaustion, emotional disturbance, could be one of longest and hardest sufferings persevering throughout the whole process of this pandemic infection.

It must be noted that LSTs is not a life-threatening condition, but the following deterioration of COVID-19, which could turn the life upside down within just a few days, can be dangerous. In this sense, to alleviate the smell and taste is not the core target of TCM treatment, but to rescue the patient's life needs urgent attention. The treatment for LST can be carried out throughout all stages of COVID-19 infection. However, it must be under an overall strategy for the treatment of the infection. At an acute and severe circumstance, particular attention for LST may only lead to distraction, if missing the attention to the critical Zang-Fu organ management. Details about treatment for COVID-19 at these stages could refer to the Journal of Chinese Medicine | Issue123 | June 2020 The Treatment of COVID-19 with Chinese Herbal Medicine.

Although believed to be the key organ related to smell sense and the major organ attacked during the COVID-19 infection, running in a well-coordinated unity of the body, Lung needs some special attention but shall not blind out all the other factors. Therefore a successful treatment for loss of smell will not be completed without looking into restoring lung's function, but a good understanding on the development of relevant pathology is more important than merely aiming at strengthening the Lung. In COVID-19 infection, the acute invasion of Cold-Damp with Toxin to the Lung could disturb the Lung's function of dispersing Qi or furthermore the function of descending Qi. Cough, chest pain with pressure shortness of breath could hence happen along with malfunction of smell. Therefore dispelling the congested external pathogens, regulating the dispersing and descending function of Lung Qi all play good parts. Points recommended for treatment are: Lung 5 Chize with Lung Yin or Phlegm and mucus complications, Lung 7 Lieque particularly good for nose and throat symptoms, Lung 9 Taiyuan good for Lung deficiency. The Yuan source point of Lung meridian is particularly beneficial if added to tackle severe meridian impairment of Yang meridian, Large intestine. In terms of smelling sense, with Lung and Heart both located in the chest, responsible for smooth Qi and blood

circulation. The harmony between Heart and Lung determines good coordination of Qi and Blood circulation. In this sense, as a result of lung's impairment during the COVID-19 infection, the Heart will be inevitably involved. So the Heart also needs to be assisted next to the Lung.

The same principle applies to the TCM treatment for loss of taste. Spleen is believed to be the key organ related to the taste sense. Spleen Qi assists the lift of Clear-Yang into the sensory orifices on the head, therefore strengthening spleen Qi to ensure smooth communication between the Brain and rest of organ-body is very important. Therefore success in treatment for loss of taste will not be achieved without looking into restoring spleen's function, but a good understanding on the development of relevant pathology is more important than merely aiming at enforcing the spleen. Resolving damp-cold, strengthening the transforming and transporting function of Spleen Qi, regulating the relevant Qi directions all play major parts here. Points recommended for treatment are: Spleen 9 Yinlingquan for dampness and water retention complications, Spleen 3 Taibai for spleen deficiency, Ren 12 Zhongwan and Ren 17 Qihai for overall Qi deficiency (Table 2). In addition, the invasion of Cold-Damp to the Spleen, under the Five Element relation, being the Child of the Heart-Fire, could cause the aggravation of loss of taste as a further result of disturbed Shen in the Heart. Therefore it is advisable to deal with the Spleen and Heart at the same time.

### **Waking/Balancing the Brain-Shen and opening the Clear orifices**

Brain, located at the top of the body, although in the modern era draws more attention as an organ where the Shen, senses consciousness and mental activities, belongs to. In fact, in TCM, Brain is in the direct charge of the Heart where the Shen lodges. The Heart is the one unavoidable to address when dealing with Shen disturbance in TCM treatment. Heart Shen is the governor of Brain-Shen, also called Yuan Shen (the Primary Shen) as a result of the interaction between Heart and Kidney essence (the origin of marrow). In the TCM picture, different senses like smell, taste, hearing, and vision, not only respectively pertain to the different individual organ system but also forms the different function and activities of the Shen, which



Table 2 Summary of treatment principles and selected points

Treatment principles	Selected points	Other technique	Herbs
Waking/Balancing the Brain-Shen and opening the Clear orifices.	GV24 Shenting. Ex-Yintang. Ex-Sishencong GV20 Beihui. GV26 Renzhong.	Scalp acupuncture: Nose-Throat-Mouth-Tongue Area and Sensory Area lower 2/5.	Changpu and Yuanzhi.
Modulation on the circulation and function of meridians.	Du Mai: SI3 + BL62. Ren Mai: LU7 + KI6. Chong Mai SP4 + PC6 Yang Qiao Mai BL62 + SI3.		Chuanxiong and Baizhi.
Aromatic Damp-resolving.			Cangzhu, Huoxiang, Peilan, Baikouren, Caoguo, Caodoukou.
Symptomatic local treatment.	LI20, Extra Bitong, ST4, ST3.		Cangerzi and Xinyihua, Sharen, or Caokouren.

is dominated by the Heart. There are a great deal of acupuncture points and Chinese herbs to regulate the Shen, however, it is not possible to select all of them at the same time, and very unwise to select them without a proper differentiation.

Among all the acupoints known for Shen treatment, GV24 Shenting and Extra Yintang are exceptionally useful as they can widely balance the Shen, benefit the Brain, and improve smell and taste at the same time. A reducing method is advised to apply. (1) GV24 Shenting could regulate the Shen, benefit the Brain, eliminate Wind-Cold-Damp, and improve the nose and taste. (2) Extra Yintang, located at the midway between the medial ends of the two eyebrows, could treat nasal congestion, sinus problems, balance the Shen, benefit the Brain and relieve the headache.

Both points are on the Governor Vessel, which connects to and benefits the Brain. They also have a very distinct use to help with the emotions during the COVID-19 outbreak.

Other points include Extra Sishencong and GV20. In severe case of LST, GV26 could also be applied with reducing method.

In principle, the selection of two of the above points is to be applied in combination with other points to

treat various syndromes of COVID-19, under a holistic strategy to deal with general situations and local complaints, which is always the TCM principle in treating any disease.

Scalp acupuncture is one of the modern micro-system acupuncture techniques which combines Chinese acupuncture needling methods with western medical knowledge on neuroanatomy, physiology, pathology to allocate the mirror areas on scalp to the corresponding zones on cerebral cortex. It is mainly for Brain related conditions, including neurological and psychological conditions. In the treatment of LST, Nose-Throat-Mouth-Tongue Area and Sensory Area lower 2/5 are the two major points/zones to be selected and stimulated to improve the sense of smell and taste.

In view of Chinese herbs to help with the Shen, Changpu (Rhizoma Anemonis Altaicae) and Yuanzhi (Radix Polygalae Tenuifoliae) are the most important ones, among all the similar function herbs, in order to combine the purpose to activate the Shen, benefit the Brain, and improve smell and taste at same time. (1) Changpu (Rhizoma Anemonis Altaicae) has function to awake the Shen and open all the Clear orifices. Besides, it could relieve the depression and improve the emotional states.

Due to invasion of Cold-Damp, the meridians and orifice of the nose, mouth and tongue are obstructed by Damp or Turbidity, or mental orifice of heart is blocked during the deterioration of COVID-19. Changpu could be applied in the prescription to open them and promote the free flow of energy in these orifices. Amount of 10 g to 12 g is commonly prescribed. (2) Yuanzhi (*Radix Polygalae Tenuifoliae*) has function to solve the Phlegm and regulate the Shen, suitable in acute invasion of Cold-Damp, or formation of Phlegm-Heat in the Lung, which blocks the nose or other orifices, resulting in LST. 10 g to 12 g is commonly prescribed. These two herbs have also good function to improve the emotions and relieve the anxiety and depression during COVID-19.

#### **Modulation on the circulation and function of meridians**

Since our body consists of physical Zang-Fu organs and meridian structures. And the infection always starts with attacks and invasion into meridian at the beginning stage. A treatment only targeting at the Zang-Fu organs without regulating the meridians would not be completed to resolve LST.

Same principle applies to the point and herbs selection for meridian regulation, as with those on Shen balancing and Clear orifices opening, careful consideration based on precise differentiation is important.

#### **Regulation of relevant meridians**

It is not enough only to look into a symptomatic treatment of LST in COVID-19, because the root blockage in certain meridians is still left untreated. For instance, if loss of taste is caused by disorder of stomach meridian, and when stomach meridian is not regulated and harmonised in time, the loss of taste will remain persistent. To obtain a clear identification and differentiation of relevant meridians requires a thorough understanding of meridian distribution and relevant symptoms.

In order to improve the Qi and Blood circulation for LST during COVID-19, the combination of Yuan-Source and Luo-Connecting points of the relevant affected meridians should be selected accordingly. Special attention shall

be paid to, Lung, Spleen, Stomach, Liver, Heart, Bladder, Kidney and Large Intestine meridians in terms of differentiating the corresponding meridians. Allocation on the relevant meridian is based on their different characteristic clinical manifestations, other than LST. In most cases, impairment of one or two meridians is often seen to cause LST.

Apart from the 12 primary meridians, Involvement of 8 Extraordinary meridians/vessels needs a special attention. This needs a unique technique on point combinations and procedures. Here are the suggestions.

**Du Mai.** From the crown of the head, the channel descends along the midline of the forehead and nose to its final point, GV26, at the junction of the upper lip and gum. One of its secondary branches ascends together with the Chong Mai and Ren Mai, to pass through the Heart, circles the mouth and the splits to ascend to the lower border of the two eyes. Since Du Mai is the governor of all the Yang meridians, when Du Mai is impaired, there would be headache, dizziness, severe aversion to cold, weak heartbeat, cold hands and feet, blocked nose with LST in COVID-19. SI3 + BL62 should be added to open this meridian.

**Ren Mai.** Ren Mai is the Sea of Yin in the body, ascending along the midline of the abdomen and ending at CV24 below the lower lip. An internal portion of the channel then winds around the mouth, connecting with GV26 and ascending to ST1 just below the eye. When Ren Mai is impaired, different Zang organs could be disturbed, causing either respiratory, cardiological, or water metabolism and digestive disorders. Pressure at the chest, abdominal pain and distention, poor appetite, weakness, tiredness, somnolence, coldness of body, blockade nose with LST in COVID-19. LU7 + KI6 should be added to open this meridian.

**Chong Mai.** The fourth branch of Chong Mai from the chest ascends alongside the throat, curves around the lips and terminates below the eye, reaching the end of the Ren Mai. When Chong Mai is impaired, there can be a characteristic manifestation as Qi rushing from the lower abdomen up till the chest, or vomiting, nausea, excessive saliva, or abdominal pain, chest pain, blocked nose with LST in COVID-19. SP4 + PC6 should be added to harmonise this meridian.

**Yang Qiao Mai BL62 + SI3.** After reaching the

points at LI15 and LI16, Yang Qiao Mai then travels to the face and connects with ST4, ST3, ST1 and BL1 where it meets with the BL, GV and Yin Qiao Mai. From here it travels over the head and terminates at GB20. When Yang Qiao Mai is impaired, there can be manifestation of numbness, weakness and spasms at the lateral aspect of the lower limbs, headache, eyes or face pain, LST in COVID-19. BL62 + SI3 should be added to regulate this meridian.

In terms of using Chinese herbs to regulate or harmonise different meridians, there are much less choices than that with acupuncture. But it is still possible to choose some herbs to achieve the effect to improve the sense of smell and taste.

**Chuanxiong (Radix Ligustici Wallichii).** It is the ideal herb to act as a guiding ingredient to lead to the head and Clear orifices, in order to promote the Qi and Blood circulation in the meridians.

**Baizhi (Radix Angelicae Dahuricae).** It enters the Lung, Spleen and Stomach meridians, having a good function to promote Qi circulation in the head. Meanwhile it dispels Wind, Cold and Damp, relieves headache, opens the nasal orifice, and removes the Phlegm in the nose.

**Jiegeng (Radix Platycodi Grandiflori).** It enters the Lung meridian, having function to disperse the Lung-Qi, benefit the throat, eliminate Phlegm, discharge the pus, and open the nasal orifice.

**Aromatic Damp-resolving herbs.** One of the main pathogenic factors for this pandemic is invasion of Cold-Damp, which disturbs the Lung's function to disperse Lung-Qi or the one to descend the Lung-Qi, and cause dysfunction of the Spleen to transport and transform, as well as impairs the function of Sanjiao in Qi and Water distribution.

Aromatic Damp-resolving herbs are to be applied to revive the function of the Spleen, aiming at symptoms of poor appetite, tiredness, chest tightness, loose stools, or diarrhoea, loss of tastes, greasy coating, and slippery pulse, etc. Cangzhu (Rhizoma Atractylodis), Huoxiang (Herba Agastaches seu Pogostemi), Peilan (Herba Eupatorii Fortunei), Baikouren (Fructus Amomi Rotundus), Caoguo (Fructus Amomi Tsao-Ko), Caodoukou (Semen Alpiniae Katsumadai), etc, are beneficial to use in the herbal prescription to treat COVID-19 with

LST. Ideally two to three herbs combined together are used to improve the function of the Spleen and recover the sense of taste at same time. In addition, advice on avoiding eating cold and raw food and drinks as well as those hot or spicy and irritating, like peppers and mustard is also valuable.

### Symptomatic local treatment

LI20 and Extra Bitong are considered as the local points, which have the function to open the nose, remove the blockage and improve the sense of smell. Meanwhile, ST4 is a good point to improve the sense of taste. ST3 could be used to treat both LST. They are punctured with reducing method. However, those points are only considered as the points for a symptomatic treatment and they are combined with the points to solve the fundamental pathology of COVID-19.

When Chinese herbs are concerned, Cangerzi (Fructus Xanthii Sibirici) 10 g and Xinyihua (Flos Magnoliae) 10 g, which have function to open the nasal orifice and improve the smell, should be added into the herbal prescription to relieve loss of smell. Sha Ren (Fructus Amomi) 5 g or Caokouren (Semen Alpiniae Katsumadai) 5 g, which have function to resolve Damp and improve the taste, could be chosen and added into the herbal prescription.

### Auxiliary techniques

Besides choosing above local points, moxibustion is also encouraged to be applied. It has the effect to dispel External pathogenic factors, eliminate Cold, resolve Damp and promote the Lung to disperse the Qi and the Spleen in transportation and transformation. Direct moxa, indirect moxa with ginger, or moxa cones on the needles are all positive methods to achieve the therapeutic effect of acupuncture. Meanwhile, electric acupuncture is also advised to be used. Tense and dispersed wave pattern may be applied in order to reduce the local inflammation so as to improve LST.

## Conclusion

In all, the success for treatment of LST shall be another good example of TCM philosophy, a precision management of local symptoms with dedicated selection of acu-points and herbal ingredients, based on good understanding on overall view of the fundamental pathology of COVID-19. Loss on either of the two aspects will not help to win the battle in the fight of the pandemic infection. Meridian modulation, Brain-Shen balancing and internal Zang-Fu organ regulation help form a constructive strategy as the core of the success.

## References

1. COVID-19 coronavirus pandemic. Online, cited 2020-07-22; available from URL: <http://www.worldometers.info/coronavirus>.
2. Diagnosis and treatment protocol for COVID-19 (version 7th). Online, cited 2020-07-22; available from [http://en.nhc.gov.cn/2020-03/29/c\\_78469.htm](http://en.nhc.gov.cn/2020-03/29/c_78469.htm).
3. Gemma Mitchell. UK adds loss of smell to COVID-19 symptoms requiring self-isolation. Online, cited 2020-07-22; available from <https://www.nursingtimes.net/news/coronavirus/uk-adds-loss-of-smell-to-covid-19-symptoms-requiring-self-isolation-18-05-2020/>.
4. CDC. Symptoms of coronavirus. Online, cited 2020-07-22; available from URL <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>.
5. Mao L, Jin HJ, Wang MD, et al. Neurologic manifestations of hospitalized patients with coronavirus disease 2019 in Wuhan, China. *JAMA Neurol* 2020, 77: 683-690.
6. Giacomelli A, Pezzati L, Conti F, et al. Self-reported olfactory and taste disorders in SARS-CoV-2 patients: a cross-sectional study. *Clin Infect Dis* 2020, 71: 889-890.
7. Tong JY, Wong A, Zhu D, et al. The prevalence of olfactory and gustatory dysfunction in COVID-19 patients: a systematic review and meta-analysis. *Otolaryngol-Head Neck Surg* 2020, 163: 3-11.
8. Lechien JR, Chiesa-Estomba CM, et al. Olfactory and gustatory dysfunctions as a clinical presentation of mild-to-moderate forms of the coronavirus disease (COVID-19): a multicenter European study. *Eur Arch Otorhinolaryngol* 2020, 277: 2251-2261.
9. Kaye R., Chang CW D, Kazahaya K, et al. COVID-19 Anosmia Reporting Tool: Initial Findings. *Otolaryngol Head Neck Surg* 2020, 163: 132-134.
10. Spinato G, Fabbris C, Polesel J, et al. Alterations in Smell or Taste in Mildly Symptomatic Outpatients With SARS-CoV-2 Infection. *JAMA* 2020, 323: 2089-2091.
11. Menni C, Valdes AM, Freidin MB, et al. Real-time tracking of self-reported symptoms to predict potential COVID-19. *Nat Med* 2020, 26: 1037-1040.
12. Menni C, Sudre CH, Steves CJ, et al. Quantifying additional COVID-19 symptoms will save lives. *Lancet*. 2020, 395: e107-e108.
13. Ferraro S, Tuccori M, Convertino I, et al. Olfactory and gustatory impairments in COVID-19 patients: mechanism, clinical characteristics, drug interferences and role in early diagnosis. *OSF online*, cited 2020-05-25; Available from URL: <https://doi.org/10.31219/osf.io/hztp9>
14. Roland LT, Gurrola JG, Lous PA, et al. Smell and taste symptom-based predictive model for COVID-19 diagnosis. *Int Forum Allergy Rhinol*. 2020, 10: 832-838.
15. Lechien JR, Chiesa-Estomba CM, De Siati DR, et al. Olfactory and gustatory dysfunctions as a clinical presentation of mild-to-moderate forms of the coronavirus disease (COVID-19): a multicenter European study. *Eur Arch Otorhinolaryngol* 2020, 277: 2251-2261.
16. BBC. Coronavirus: Prince Charles's sense of smell and taste still not back. Online, cited 2020-07-22; available from URL <https://www.bbc.co.uk/news/uk-53026903>.
17. Wang QR. Yi Lin Gai Cuo - correcting the errors in the forest of medicine. Boulder, Blue Poppy, 2007.
18. Unschuld PU, Tessenow H, Zheng JS. Huang Di Nei Jing · Su Wen: an annotated translation of Huang Di's Inner Classic - basic questions. California: University of California Press, 2011.



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# COVID-19-Linked Loss of Smell and Taste: Case study and Discussion

By Tianjun Wang

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## Abstract

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Increasing evidence indicates that loss of smell and taste are key symptoms of COVID-19. This paper discusses the aetiology, pathology and mechanism of loss of smell and taste from the perspective of traditional Chinese medicine (TCM). The primary Chinese medicine patterns of damp-cold and damp-heat with toxin are described, along with an explanation of the main zang-fu organs involved (the Lungs and Spleen), and how the mind and brain may be involved. A confirmed COVID-19 case in which the patient lost their sense of smell and taste is also reported, including symptoms, pattern identification and treatment with Chinese herbal medicine and acupuncture.

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## Keywords

COVID-19, coronavirus, SARS-CoV-2, pandemic, Chinese medicine, TCM, Chinese herbal medicine, acupuncture

## Introduction

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Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is a newly discovered virus that causes the disease called COVID-19. Since its outbreak early in 2020, over 22,324,351 cases and 784,730 deaths worldwide (as of 19th August 2020) have been confirmed.<sup>1</sup> As an acute respiratory disease, the main symptoms of COVID-19 are flu-like, including high temperature, cough and shortness of breath.

Spinato and colleagues reported in the *Journal of the American Medical Association* on 26th May 2020 that 64.6 per cent of patients with COVID-19 experienced altered sense of smell or taste. These symptoms were actually higher in prevalence than two other common symptoms - a dry or productive cough (60.4 per cent) and fever (55.5 per cent).<sup>2</sup> An earlier study from the UK investigated whether loss of smell and taste was specific to COVID-19 across 2,618,862 individuals who used an app-based symptom tracker.<sup>3</sup> Among the 18,401 subjects who received a test for COVID-19, the proportion who reported loss of smell and taste was higher in those with a positive test result (4,668 of 7,178 individuals; 65.03 per cent) than in those with a

negative test result (2,436 of 11,223 participants; 21.71 per cent). Based on this study, in early June the team published a paper in *The Lancet*, in which they stated that loss of smell and taste had a higher predictive ability for COVID-19 than fever or persistent cough.<sup>4</sup>

In April 2020, the World Health Organization (WHO), along with many European Union countries and the USA, added loss of smell and taste to the list of key COVID-19 symptoms.<sup>5</sup> Later in May 2020 the UK Government also added it to its own list of symptoms.<sup>6</sup> Soon after, the UK National Health Service (NHS) listed loss or change to sense of smell or taste as one of the three main symptoms of COVID-19, along with high temperature and recent, continuous cough.<sup>7</sup>

Interestingly, few of the early reports from China mentioned symptoms of loss or change of smell and taste, except one study that mentioned their prevalence at 5.6 per cent and 5.1 per cent respectively - much lower than the Western reports cited above.<sup>8</sup> In addition, guidance released by the National Health Commission & State



Administration of Traditional Chinese Medicine on 3rd March 2020, 'Diagnosis and Treatment Protocol for COVID-19 (Trial Version 7)', does not mention loss of smell and taste at all.<sup>9</sup> Further studies are needed to investigate these disparities in prevalence, which in some cases vary by a factor of approximately 10.

### Traditional Chinese medicine understanding

Since the outbreak of the novel coronavirus in China early in 2020, the understanding of COVID-19 by practitioners of traditional Chinese medicine (TCM) has been increasing. With the spread of COVID-19 through Western countries, public health services have not been able to effectively help many of those suffering from the disease, and a great number of enquires have been made to practitioners of alternative medicine. For example, in the few months prior to August 2020, the author (based in London, UK) received over 1000 enquires of patients suffering from suspected COVID-19, about 90 per cent of which were from the Chinese community. So far, the author has treated over 100 patients via online consultations. Among them, nine were confirmed coronavirus infection cases and more than 50 were highly suspected. During the consultation patients were requested to describe their main symptoms, such as fever, fatigue, cough, muscle pain, stomach-ache or diarrhoea. Most of the cases reported, to varying degrees, a loss or change in their sense of smell and taste.

In the early stages of infection by SARS-CoV-2, the patient typically presents with a pattern of damp-cold with toxin, with symptoms of chills and fever, fatigue and body pain, and presents with a pale red tongue with a thick and greasy coat. Some may present with a pattern of damp-heat, with symptoms of high fever and a red tongue with yellow and greasy coat. Loss of smell and taste may appear in both patterns. The primary zang-fu organs involved are the Lungs and the Spleen. From the TCM perspective, the sense of smell is related to the Lung and the sense of taste to the Spleen. The signs and symptoms of a pattern of Lung impairment are aversion to cold/chilliness, slight fever, cough, itching in the throat, loss or change of smell, chest congestion, shortness of breath, muscle pain and sweating.

The signs and symptoms of a pattern of Spleen impairment are loss of taste, poor appetite, nausea, vomiting, abdomen bloating, loose stools or diarrhoea, fatigue, general cold, heavy body and limbs, and bruises.

The sense of smell can also be seen to be dependent on the mind and Brain,<sup>10</sup> as well as the Lungs.<sup>11</sup> In his commentary on *Huangdi Neijing Suwen* (Yellow Emperor's Inner Classic, Plain Questions) Chapter 81, Wang Bing explains 'Tears and snivel are Brain' (泣涕者脑也). *Suwen* Chapter 81, 'Discourse on Explaining the Subtleties of Essence' states 'The nose orifice communicates with the brain' (鼻窍通于脑).<sup>12</sup> Similarly, Li Shi Zhen states in the *Ben Cao Gang Mu* (Compendium of Materia Medica) that, 'The nose is through heaven; heaven is the head' (鼻气通于天, 天者头也). The idea is even more clearly stated by Qin Ren Wang in *Yi Lin Gai Cuo* (易林改错 Correction of Errors in the Forest of Medicine) Chapter 'Brain and Marrow': 'The nose

### few of the early reports from China mentioned symptoms of loss or change of smell and taste

is connected with the brain. The objects of smelling are attributed to the brain (鼻通于脑, 所闻香臭归于脑).<sup>13</sup> The significance of this is that in many cases it seems the Brain is directly affected by COVID-19, with many patients reporting symptoms of lack of concentration, poor memory and insomnia, as well as loss of smell and taste. The latter can be severe and often last longer than the patient's general recovery from other symptoms the disease.

### Case

#### Male, 20 years old, Chinese student living in London.

On 9th March 2020, the patient started to experience fever, dry cough and loss of concentration. His temperature was initially fluctuating and then increased to between 39 and 40 degrees Celsius. On 18th March an ambulance took him to an NHS hospital in London. The next day he was sent home after testing positive for COVID-19, with no treatment except paracetamol. I was contacted by the patient's family and then the patient himself on 22nd March. He still reported a fever with a temperature of 38 to 39 degrees Celsius. He reported that he had lost his normal sense of smell but that he could often smell something that was not there. He had no nasal blockage. His sense of taste was also impaired. Other symptoms included cough with slightly blood-tinged sputum, fatigue, dizziness and poor appetite. His tongue was pale red with a thick white and greasy coat.

### From the TCM perspective, the sense of smell is related to the Lung and the sense of taste to the Spleen.

The TCM pattern was damp-cold invading the Spleen and Lung and with evil toxin. The treatment principles were to nourish the Spleen, disperse the Lung qi, eliminate cold and damp, and dispel toxin.

The Chinese herbal formula was based on *Jing Fang Bai Du San* (Schizonepeta and Saposhnikovia Powder to Overcome Pathogenic Influences) plus *Wu Ling San* (Five-Ingredient Powder with Poria), as follows:

Jing Jie (Schizonepeta Herba) 9g  
Fang Feng (Saposhnikovia Radix) 6g  
Qiang Huo (Notopterygium Rhizoma seu Radix) 6g  
Du Huo (Angelicae pubescentis Radix) 6g, Chai Hu (Bupleuri Radix) 6g  
Qian Hu (Peucedani Radix) 6g  
Zhi Qiao (Aurantii Fructus) 4g  
Fu Ling (Poria) 9g  
Jie Geng (Platycodi Radix) 6g  
Zhu Ling (Polyporus) 9g  
Ze Xie (Alismatis Rhizoma) 9g  
Bai Zhu (Atractylodis macrocephalae Rhizoma) 9g  
Gui Zhi (Cinnamomi Ramulus) 6g  
Gan Cao (Glycyrrhizae Radix) 4g.

**Explanation:** Jing Jie, Fang Feng, Qiang Huo and Chai Hu dispel wind-cold, and together with Du Huo dispel damp and toxin; Qian Hu and Jie Geng disperse the Lung qi; Fu Ling, Zhu Ling and Ze Xie drain dampness; and Bai Zhu, Fu Ling and Gan Cao nourish the Spleen.

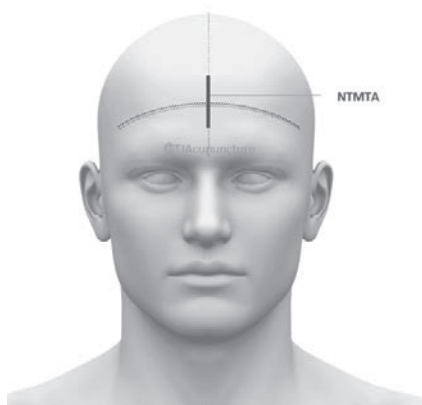


Figure 1: The Nose-Throat-Mouth-Tongue Area

Acupressure was also suggested at Lieque LU-7, Yuji LU-10, Yingxiang LI-20 and the scalp acupuncture Nose-Throat-Mouth-Tongue Area, which is located in the middle line

of the forehead, two centimetres inferior to the anterior hairline (see Figure 1). The patient was asked to press, massage or pat the area lightly with fingers.

He took the herbs and practised the acupressure for four weeks, during which time his general health and sense of smell and taste slowly improved, until by April he had fully recovered.

## Discussion

Novel coronavirus infection is a completely new disease, not only for TCM but also for Western medicine. Because of this, as medical practitioners we need to carefully observe and study its clinical manifestations and understand its aetiology and pathology. Although loss of smell and taste were not reported in early studies of the disease, they were noticed in Western countries and reported later in March 2020. In the beginning phase of my online consultations I also focused on the classic symptoms of infectious disease such as fever, chill, fatigue, cough, breathing problems and body aches. It was only from the middle of March that some patients began to mention that they had experienced a change in smell and taste, and I realised this may be related to the infection. When I began to focus my enquiry on change of smell and taste, I found it common among many patients. With more evidence from patients and published materials, I started to promote this finding amongst our profession, via social media, online seminars and conference talks. I am glad to see that loss of smell and taste has now been listed in most countries' guidance, including the UK where it is listed it as one of the top three typical symptoms of COVID-19.

Traditional Chinese medicine, incorporating Chinese herbal medicine, acupuncture and acupressure, may play an important role in the treatment of symptoms related to COVID-19. Even if practitioners are unable to treat confirmed and suspected patients in person, we can provide online consultations, herbal medicine and guided acupressure.

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## Endnotes

1. See <[www.worldometers.info/coronavirus/](http://www.worldometers.info/coronavirus/)> [Accessed 19/08/20]
2. Spinato, G., Fabbris, C., Polesel J. et al. (2020). Alterations in Smell or Taste in Mildly Symptomatic Outpatients With SARS-CoV-2 Infection, *JAMA*, 323(20), pp. 2089-2091.
3. Menni, C., Valdes, A.M., Freidin, M.B. et al. (2020). Real-time tracking of self-reported symptoms to predict potential COVID-19, *Nat Med*, DOI: 10.1038/s41591-020-0916-2.
4. Menni, C., Sudre, C.H., Steves, C.J. et al. (2020). Quantifying additional COVID-19 symptoms will save lives, *The Lancet*, DOI: [org/10.1016/S0140-6736\(20\)31281-2](https://doi.org/10.1016/S0140-6736(20)31281-2)
5. See <<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/q-a-coronaviruses>> [Accessed 19/08/20]
6. Smyth, C. (2020). Smell loss has little effect on coronavirus case tallies, *The Times*, available at <<https://www.thetimes.co.uk/article/smell-loss-has-little-effect-on-coronavirus-case-tallies-230nm82vl>> [Accessed 10/06/20]
7. See <<https://www.nhs.uk/conditions/coronavirus-covid-19/symptoms/>> [Accessed 19/06/20]
8. Mao, L., Jin, H.J., Wang, M.D. et al. (2020). Neurologic Manifestations of Hospitalized Patients With Coronavirus Disease 2019 in Wuhan, China, *JAMA Neurol*, 77(6), pp. 683-690.
9. National Health Commission (2020). Diagnosis and Treatment Protocol for Novel Coronavirus Pneumonia (Trial Version 7), available at <[http://en.nhc.gov.cn/2020-03/29/c\\_78469.htm](http://en.nhc.gov.cn/2020-03/29/c_78469.htm)> [Accessed 10/06/20]
10. A capital B is used for Brain, as in TCM the Brain is one the zang-fu organs, just like the Spleen and Lung.
11. Maciocia, G. (2005). *The Foundations of Chinese Medicine (second edition)*. Churchill Livingstone: Edinburgh, p. 71.
12. Unschuld, P.U., Tessenow, H. & Zheng, J.S. (2011). *Huang Di Nei Jing Su Wen: An Annotated Translation of Huang Di's Inner Classic – Basic Questions*. University of California Press: California, eBook, p. VII 725
13. Wang, Q.R. (2007). *Yi Lin Gai Cuo - Correcting the Errors in the Forest of Medicine*. Blue Poppy Press: Boulder, p. 45.

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# Acupuncture Strategies to Tackle Post COVID-19 Psychological and Neuropsychiatric Disorders

Liuzhong Ye, Peilin Sun & Tianjun Wang

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## Abstract

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From the perspective of traditional Chinese medicine, COVID-19 poses significant challenges to a human's xing (形, physical body, internal organs), qi (气, vital energy) and shen (神, mind, spirit). This article explains the close relationship of these three aspects of the human being and how they are affected by COVID-19 to cause neuropsychiatric disorders. The authors explain how acupuncture can be utilised to adjust xing, regulate qi and balance shen in order to effectively treat post-COVID-19 psychological and neuropsychiatric symptoms.

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## Keywords

Acupuncture, Chinese medicine, TCM, COVID-19, coronavirus, SARS-CoV-2, neuropsychiatric disorders, depression, anxiety

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## Introduction

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 Since the first case of novel coronavirus (SARS-CoV-2) disease (COVID-19) was officially diagnosed and reported in December 2019, the resulting pandemic has led to the loss of many lives and caused a huge impact on the global economy. Under the extraordinary circumstances of the pandemic, all aspects of human life - social, economic and cultural - have been affected. The physical effects of the virus, in which various organs and systems are attacked, include damage to the nervous system, which can affect the mental health of all age groups. Various psychological problems and associated symptoms have arisen during the pandemic, including anxiety, depression, loneliness, frustration, upset, insomnia, headache, restlessness and mild cognitive impairment. Contributing to these, there may also be worries about recession, unemployment and debt, and subsequent alcohol abuse in adults. In addition, COVID-19 survivors have reported stigma after being infected by

the virus. Children may suffer from nervousness, hyperactive behaviour and lack of concentration, which has affected their home-schooling and studies during lockdown. The influence of the pandemic on people's mental state is of sufficient importance to require immediate attention. We are not the only one sharing concern over this issue: Mental Health UK has issued psychological first aid guidance from the beginning of the outbreak.<sup>1</sup> When the intense symptoms of the infection subside, this is not the end of the story. In fact, recovery from COVID-19 has proved to be a long journey for many people. The *Daily Mail*, reporting on the recent UK government SAGE (Scientific Advisory Group for Emergencies) meeting regarding COVID-19 (7th May 2020), noted 'the existence of long term health sequelae', including fatigue, breathing difficulties, memory loss, post-intensive care syndrome, flashbacks and emotional distress.<sup>2</sup> In the same report, NHS officers recognised the



challenge in helping post COVID-19 patients struggle back to ordinary life.

Traditional Chinese medicine (TCM) provides an alternative option to conventional methods to deal with post-COVID-19 psychological and neuropsychiatric problems, and has a long history of dealing with similar conditions.

### Biomedical perspective

While SARS-CoV-2 is still sweeping across the globe, the medical understanding of COVID-19 is developing day by day. As part of this, the prevalence of COVID-19-related neuropsychiatric disorders is raising growing concern among medical professionals. However, due to the complexity of neuropsychiatric disease, post-COVID-19 patients are left with few options in terms of treatment. We have reason to be concerned that COVID-19 may lead to severe and long-lasting mental and emotional suffering for patients. Without proper management and treatment of these disorders, patients face a difficult, painful and prolonged recovery, both physically and mentally.

These symptoms are not new. Previous influenza pandemics have been associated with long-lasting neuropsychiatric consequences.<sup>3</sup> A systematic review<sup>4</sup> of severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS) infection showed almost one in three hospitalised cases went on to develop post-traumatic stress disorder (PTSD), rates of depression and anxiety were at roughly 15 per cent one year after the illness, and more than 15 per cent of subjects complained of fatigue, mood swings and sleep disorders. Although based on SARS and MERS, this review suggests a clear prospect of the potential future of post-COVID-19 psychiatric symptoms. The possible impact of COVID-19 on neuropsychiatric health includes several aspects:

### Psychological effects

As a global emergent event, this pandemic has had a wide social impact. Governmental rulings, including physical distancing measures and quarantine, are having various effects on the population.<sup>5,6</sup> Reactions include widespread anxiety, social isolation, high levels of stress (particularly amongst healthcare and other essential workers),<sup>7</sup> worries

about unemployment and financial difficulties.<sup>8</sup> Those infected by the virus tend to suffer even more, from fear about the outcome of their illness,<sup>9</sup> from the stigma associated with infection,<sup>10</sup> or from amnesia or traumatic memories following severe illness.<sup>11</sup>

### Central nervous system damage

It is estimated that more than one-third of patients with COVID-19 develop neuropsychiatric symptoms; severe symptoms seem to be associated with more severe disease.<sup>12</sup> Although there is not yet adequate evidence to prove exactly what COVID-19 does to the body, reports suggest that the virus enters the central nervous system (CNS) and causes damage to the brain. In a recent case series in France of 58 patients in intensive care, 84 per cent developed neuropsychiatric symptoms including

agitation, confusion and dysexecutive syndrome (cognitive, emotional and behavioural symptoms typically involving frontal lobe damage).<sup>13</sup> It is also reported that up to 88 per cent of patients develop anosmia or ageusia that are thought to be due to invasion of the olfactory bulb by the virus, further

suggesting brain involvement.<sup>14</sup> A case series from Wuhan demonstrated that at least 20 per cent of patients who died from COVID-19 showed evidence of encephalopathy.<sup>15</sup> Such damage caused by the virus to the brain and nervous system does not disappear immediately after the symptoms of infection subside. We believe the process of recovery and repair of the brain and nervous system at least partially determines the severity and duration of any neuropsychiatric symptoms experienced by the patient.

### Inflammatory and immune effects

The physiological effects of COVID-19 are complex. Cytokines can activate the hypothalamic-pituitary-adrenal (HPA) axis, resulting in the release of adrenal glucocorticoids. Although there is no solid research evidence to confirm that this inflammatory immune reaction has a profound and long-term impact directly on the nervous system, the cytokine storm involved in COVID-19 is likely to play a significant role in the physical and mental suffering of survivors.

### Neuro-endocrine impact

The stress experienced by patients facing severe illness can hugely impact the progress of the disease and their

**Rates of depression and anxiety were at roughly 15 per cent one year after the illness, and more than 15 per cent of subjects complained of fatigue, mood swings and sleep disorders.**



mental health. When the stress response is triggered, the activation of the neuroendocrine HPA axis and the renin-angiotensin-aldosterone system (RAAS - an aspect of the endocrine system involved in the regulation of blood pressure and body fluids) plays an important part in somatic psychiatric disturbance.<sup>16</sup> Angiotensin-converting enzyme 2 (ACE2) has been shown to have an effect on the stress response and on anxiety. An increase in expression of ACE2 can cause a rise in blood pressure, shortness of breath and palpitations, which are closely related to symptoms of stress and anxiety. The ACE2 receptors are now believed to be the main targets of attachment during SARS-CoV-2 infection. Indeed, an increased expression of ACE2 has been noted not only in the respiratory tract, lungs, ileum, bladder, oesophagus, heart and kidneys of COVID-19 patients, but also in the hypothalamus, pituitary and adrenal glands.<sup>17,18</sup> It is worth mentioning that in SARS patients, after the lung, the adrenal and pituitary glands showed the highest concentration of virus particles,<sup>19</sup> suggesting that the HPA axis could be similarly targeted during SARS-CoV-2 infection. In such cases a tailored treatment to rebalance the HPA axis will help reduce patients' levels of stress and anxiety.

## Traditional Chinese medicine

### Aetiology and pathology

As the encounter between humans and SARS-CoV-2 develops, there is a conflict between the soaring demand for effective healing and the limitation of knowledge about the disease. The psychological suffering of patients tends to become clear when survivors emerge from the acute stage of the disease. While there is still uncertainty about the exact pathomechanism involved in post-COVID-19 neuropsychiatric problems, we have searched the TCM literature to outline a framework for acupuncture treatment to resolve these symptoms.

TCM holds that a human being is composed of three fundamental interacting aspects: xing (形, physical body and internal organs), qi (气, vital energy) and shen (神, mind, spirit):

- Xing governs the core physiological activities, supplying essential substances (qi, blood, body fluids and jing [essence]) to support the functioning of qi and shen. The state of the xing determines the quality of qi and shen, and the duration of any pathological impairment;
- Qi moves constantly through the body to connect the

shen and xing. The circulation of qi connects and governs the function of the zang-fu (internal organs) and other body structures, tissues and channels, as well as the expression of the emotions and mental state;

- Shen determines our mental state, our response to emotional stimulus, influences all physiological activities by affecting the movement of qi, and profoundly influences sleep, thought and consciousness. Shen is a manifestation of the xing, as its foundation lies in the zang-fu organs, with which it communicates via qi.

SARS-CoV-2 infection is characterised by an aggressive pathogenesis and a rapidly progressing, multi-dimensional and toxic nature; it can rapidly spread to multiple internal organs and systems, causing widespread dysfunction. COVID-19 involves various imbalances affecting the xing, qi and shen from initial infection until recovery

from the disease; full psychological recovery often happens long after recovery from the general symptoms of initial infection. Attempting to treat such disorders without consideration of the full clinical picture -

including the state of the xing, qi and shen - is unlikely to bring about optimal therapeutic effects.

### Disorders of xing

As COVID-19 progresses, the invasion of wind, cold, damp and toxic heat into the channels adversely affects the zang-fu. Initially, COVID-19 impairs the Lung, Spleen and Sanjiao, but can quickly penetrate further to damage the Heart, Pericardium, Liver and Kidney during the severe and critical stages. All of these pathomechanisms can be associated with neuropsychiatric manifestations.

#### Lung

The main function of the Lung is to disperse and descend qi during respiration. The Lung is one of the primary organs attacked by SARS-CoV-2, commonly manifesting severe symptoms as a result of the failure of dispersing and descending of Lung qi, such as gasping for breath and excessive secretion of mucus. Meanwhile, the Lung is responsible for promoting qi circulation in the body. In its supportive role as the 'prime minister' to the 'emperor' of the Heart (as described in classical literature), it assists in circulating the blood by controlling the gathering (zong) qi. Being associated with the metal phase of the five phases (wu xing), the Lung controls Liver wood. When the Lung loses its ability to disperse qi and regulate the Liver, it can

**Initially, COVID-19 impairs the Lung, Spleen and San Jiao, but can quickly penetrate further to damage the Heart, Pericardium, Liver and Kidney.**

cause stagnation of qi. Therefore, if impaired, the Lung can contribute to emotional disturbance such as irritability, frustration, sadness, tearfulness, anxiety, chest tightness and restlessness due to qi stagnation and heat accumulating in the Lung and Liver.

### Spleen

The Spleen is in charge of transformation and transportation of food and fluids, which occurs as part of the process of production of qi and blood. According to five phase theory, the Spleen is associated with earth and is the mother of Lung-metal. When the Spleen fails in its role of transformation and transportation, the resulting phlegm and damp can end up being stored in the Lung. Moreover, as the root of post-heaven, the Spleen provides qi, blood and essence to all of the other organs. Dysfunction of the Spleen can lead to earth-type mental and emotional symptoms, such as lassitude, depression, loss of interest of life, mental fatigue, repetitive negative emotions such as frequent recall of traumatic memories, and impaired concentration.

### Shaoyang - Sanjiao and Gall Bladder

The Shaoyang consists of the Sanjiao and the Gall Bladder, and represents the pivot of the exterior channels; as such it is commonly pathologically affected during COVID-19. The Sanjiao is the passageway for yuan (original) qi and water. The emotional symptoms of Shaoyang patterns include irritability and anger, restlessness, anxiety, insomnia (with difficulty falling asleep or repetitive waking at the same time each night), nightmares, depression with a stiff and heavy body and waking tired, with the symptoms typically better after exercise. As stated in *Su Wen* (Simple Questions) chapter 8, 'The Gall Bladder is responsible for what is exact and just; determination and decision stem from it.' The Gall Bladder is thus not only involved in making decisions, it provides courage and initiative, and works with the Liver to make appropriate responses toward changes in external circumstances, and enables an individual to observe and live by guiding principles. In this way, the pandemic lockdown in many countries, in which the free movement and social contact of people was reduced for an unexpectedly long period, can trigger an emotional response from the Gall Bladder, resulting in frustration and lack of courage for life and the future. Pathology of the Gall Bladder can manifest as lack of assertiveness, poor judgment, hesitation, timidity, poor self-image and fear.<sup>20</sup>

### Heart

Whether during the initial stage or the later critical stage of COVID-19, the Heart can be affected. The Heart is regarded as the emperor, governing the physiological functions of all the zang-fu organs. In particular it is in charge of blood circulation and regulating the blood vessels. Impairment of the Heart can cause blood stasis in various organs, tissues and channels, leading to pain. Being associated with the fire phase, when the Heart is affected by heat/fire this easily causes hyperactivity throughout the body, along with yin depletion and heat in the blood. Symptoms of Heart disharmony are over-excitement, anxiety with a sensation that the heart is racing, restlessness, panic attacks, insomnia with difficulty falling asleep, and, in severe cases, delirium. On the other hand, depletion of Heart qi/yang due to obstruction by lingering cold-damp can evolve into Shaoyin disharmony characterised by extreme tiredness, aversion to cold, water retention, low spirits, somnolence or manic speech. The Heart houses the shen, which governs all mental/emotional activities, and is therefore involved in all neuropsychiatric pathology. In order to restore the balance of the mental state after COVID-19, it is often necessary to replenish Heart yin, qi and yang, and promote blood circulation.

### Liver

The Liver is responsible for the smooth movement of qi as well as the storage and regulation of blood. The Liver manages the smooth expression of emotions via its qi-regulating function. Liver impairment can lead to mental and emotional disorders. On the other hand, intense or prolonged emotional imbalance will cause impairment of the Liver. In addition, Liver wood is the mother of Heart fire and assists the digestive function of Spleen earth, which explains why symptoms of shen disturbance and digestive problems commonly co-exist with Liver pathology. In terms of mental and emotional symptoms, Liver dysfunction is characterised by anger, frustration, aggression, resentment, irritability, anxiety and panic attacks, as well as being associated with hormonal disturbance and menstrual irregularity. From this we can see clearly that the Liver in TCM is associated with the nervous system. Balancing the Liver can therefore help to stabilise many neuropsychiatric disorders.

**The Heart houses the shen, which governs all mental/emotional activities, and is therefore involved in any neuropsychiatric pathology.**

## Kidney

The Kidney can be severely depleted by COVID-19, especially during the severe and critical stages of the disease when it settles into the Shaoyin level. The Kidney, located in the lower jiao, is associated with water. The Kidney, Spleen and Lung represent the lower, middle and upper sources of water in the body respectively. These three organs govern water metabolism and are involved in respiration. Because the Heart and Kidney are directly connected via a branch of the Kidney channel, when there is too much retained water it can move up to the Heart, causing somnolence, fear, loss of stamina and poor memory. On the other hand, if there is pronounced heat in the Heart, this can burn out the Kidney yin. In turn, Kidney yin deficiency will lead to flaring up of deficient heat, disturbing the shen and causing emotional instability and insomnia. Moreover, the Liver and Kidney are said to share the same origin and mutually support and affect each other, so that when the Kidney is impaired the Liver can also be affected, causing bad temper, red face and eyes, headaches and high blood pressure. The TCM Kidney function includes the biomedical functions of adrenal glands. Furthermore, the Heart, Liver and Kidney can be seen as a mirror of the HPA axis. Given the effect of COVID-19 on ACE2 receptors and the HPA axis, treatment of these organs is an important consideration in clinic. Post traumatic stress disorder, with its widespread symptoms is also characteristic of Liver, Kidney and Heart pathology.

## Disorders of qi

Upward, downward, outward and inward are the four directions of qi movement in the body. If qi cannot travel smoothly and appropriately in these directions, life will be under threat. Harmonious movement requires proper coordination between the internal organs and channels to maintain a harmonious balance. The emotional state easily affects the movement of qi, while conversely imbalances of qi in different zang-fu organs affects the smooth expression of emotions. Moreover, qi should be sufficient and not in excess. Disorders of qi in terms of movement or quantity will cause sickness, both physically and mentally.

Exogenous pathogens are also a key factor that can disturb the channel system and the wei (defense), qi, ying (construction) and blood. This can affect the xing, resulting in damage and disturbance of zang-fu organs, as well as disrupt the shen, affecting the brain and nervous system. With qi working as the connector and conductor between the xing and shen, these disorders may happen separately or simultaneously.

Qi impairment from COVID-19 initially involves blockage and disturbance of the three yang channels (according to six channel differentiation), or the wei and qi levels (according to four level differentiation); in other

words, the exterior aspect of the person. At this stage, mental and emotional symptoms depend on the specific nature of the exterior pathogenic factor involved, and are usually mild to moderate in intensity. Wind is associated with changeable or sudden emotional reactions, like stress. Cold and damp contribute to low spirits, lassitude, depression, or in severe cases delirium. Heat and fire lead to irritability, restlessness, anxiety and sleeping difficulties. Of course, the stronger and deeper the penetration of the pathogenic factor, the more severe the symptoms become. As the disease develops, the qi impairment tends to involve more depletion of qi, blood, body fluids, yin and yang, and inevitably damage to the xing. It is worth noting that qi impairment presents throughout the whole disease process of COVID-19, even during the recovery stage. Because of the rapid and aggressive progression of COVID-19, qi disorders of the three yang channels or wei/qi levels may co-exist with xing impairment. Ignorance about the importance of resolving the qi impairment in the exterior can impede the efficacy of TCM treatment. The stage at which the exterior patterns are most pronounced usually represents the time when the immune system is most active in its fight against the virus. Inflammatory changes and immune activity may continue long after the early symptoms have disappeared. In addition, since qi and blood are closely related, blockage of qi can cause blood stasis, which explains why many COVID-19 patients develop thrombosis and cerebrovascular accident (CVA). Blood clotting is one of the main pathologies in severe cases of COVID-19. Treatments to promote qi and blood circulation should be considered when treating active infection, as well as at the recovery stage, to encourage repair of the damage to the internal organs, brain and the nervous system.

## Disorders of shen

The shen is an integral aspect of health and well-being and cultivation of the spirit is considered essential for health maintenance. Emotions are an aspect of the function of shen, and also reflect when the shen is disturbed. Therefore, the state of the shen can be diagnosed by observing the person's emotional state. During the pandemic, both infected and non-infected members of the population experience emotional stress. In TCM such stress is understood in terms of the seven emotions - joy, anger, grief, melancholy, worry, fear and fright - which disturb the circulation of qi and blood and can directly affect the zang-fu organs. According to the *Nei Jing Su Wen* (Yellow Emperor's Classic of Internal Medicine Simple Questions), anger injures the Liver, joy injures the Heart, grief and melancholy injure the Lung, worry injures the Spleen, and fear and fright injure the Kidney. It is also stated that anger causes qi to rise, joy causes it to move

slowly, grief consumes it, fear causes it to decline, fright causes it to be deranged and worry causes it to stagnate. This clearly explains that intense emotions have adverse effects on the movement of qi, while qi acts as the core connector between the shen/emotions and the xing/internal organs.

In TCM the seven emotions are seen as the expressive reactions of the zang-fu organs toward different stimuli. An imbalanced zang-fu organ often dominates the body and mind with its own associated emotion. To restore a healthy mental and emotional balance, it is necessary to achieve a healthy internal organ system as well as balanced qi circulation. It is this interactive relationship between the qi of the emotions and the internal organs that forms the foundation for resolution of neuropsychiatric - i.e. shen - disorders. Therefore we set out below the framework for how shen disorders can be understood according to the five zang organs.

#### Heart

The Heart is the governor of all of the emotions in the body. All mental and emotional activities are monitored and overseen by the Heart. Palpitations, insomnia, restlessness, forgetfulness, poor concentration, lack of enthusiasm and vitality, depression and despair are symptoms that indicate Heart pathology. Emotional imbalances related to other organs, such as anger, frustration, anxiety, fear, sadness, and insecurity, can also indicate shen disturbance.

#### Lung

The Lung is associated with grief and sadness. Pathology due to COVID-19 can impair Lung function, causing emotional distress. At the same time, overwhelming or lingering grief or sadness can affect the physiological functions of the Lung. Social distancing, home isolation, loss of family members, poor or insufficient treatment, lack of adequate and prompt viral testing, and uncertainty about the future can all create emotional frustration and thus disharmony between Liver wood and Lung metal; if not relieved, this will cause Lung suppression, characterised by sadness, pressure in the chest, hyperventilation and low mood.

**Social distancing, home isolation, loss of family members, poor or insufficient treatment, lack of adequate and prompt viral testing, and uncertainty about the future can all create emotional frustration and thus conflict between Liver wood and Lung metal.**

#### Spleen

Spleen-type psychological impairment due to COVID-19 can manifest in patterns of worrying and brooding, including dwelling on the past, repetitive recall of traumatic memories, and poor concentration. Biomedical research shows that the Spleen is integral to the sensitisation that happens due to prolonged stress in mice, leading to anxiety and cognitive problems.<sup>21</sup> In TCM terms this involves a stagnant Liver suppressing the Spleen, leading to disharmony of the yi (the capacity for studying and identifying the circumstances of a situation).

#### Liver

By ensuring the smooth movement of qi and blood, the Liver facilitates proper expression of all emotions. Under the circumstances of the pandemic, people all over the world have been confronted with immense stress and frustration. In particular, frontline healthcare workers have reported despair and frustration; in fact, one quarter

to one third of them may suffer from long-term PTSD.<sup>22</sup> If we consider the major symptoms of PTSD such as irritability, tension, headaches and mood swings, we can see the strong influence of the Liver. In fact, this is a solid demonstration of how impairment of the Liver by stress can cause long-term mental suffering. This involves a vicious circle, where emotional stress

impedes Liver qi, which then generates stagnant heat, after which hyperactivity of Liver yang follows, leading to headache, dizziness, depression, anger, upset, frustration, nervousness, agitation, restlessness and sleeping disorders over the longer term. In practice, soothing Liver qi and strengthening Liver blood and yin can help to resolve much of this type of suffering.

#### Kidney

The Kidney is closely associated with the fear and terror that is commonly seen in traumatised patients. The Kidney is the root of pre-heaven, and if a person is constantly under the influence of strong negative emotions, the Kidney qi is depleted, which weakens the root of the life force. Strengthening the Kidney in such patients provides a better chance for the body to regain balance and health.



## Stabilisation of shen

Acupuncture is well known as an effective method to stabilise the mental/emotional state. In the case of COVID-19, acupuncture not only has tranquillising, relaxing effects but also speeds up the repair and recovery of the brain and nervous system. By stimulating both local and distal channel points, acupuncture can promote activity of specific cerebral and nerve regions, and increase local oxygen supply and blood circulation in the brain.

### 1. Scalp acupuncture

Scalp acupuncture combines acupuncture needling methods with biomedical knowledge of neurological anatomy, physiology and pathology.<sup>24</sup> Treatment should be focused on the primary areas of the nervous system indicated by the symptoms, for example:

- Agitation, confusion, memory loss: Spirit-Emotion Area, Foot-Motor Sensory Area.
- Hyposmia and hypogeusia: Head Area (or Nose-Throat-Mouth-Tongue Area), Sensory Area (lower 2/5).
- Insomnia, depression, anxiety: Spirit-Emotion Area, Foot-Motor Sensory Area (if frequent urination is anxiety-related, the Foot-Motor Sensory Area is also very helpful).

### 2. Benshen points

During the development of acupuncture theory and practice, a group of special points for the treatment of mental and emotional disorders were identified that are associated with the zang organs:

- Shentang BL-44 (Spirit Hall): This point is associated with the shen, the fire phase, the Heart and the Pericardium. It can be used to treat restlessness, nervousness, excessive negative concern, hysteria and agitation.
- Yishe BL49 (Thought Home): This point is associated with the yi (thought), the earth phase and the Spleen. It can be used to treat dwelling on the past, worries about future health and financial security, and obsession.
- Puhu BL-42 (Soul Door): This point is associated with the po (instinct), the metal phase and the Lung. It can be used to treat sadness about getting sick, grief and sorrow due to bereavement or unemployment, and self-pity.
- Hunmen BL-47 (Courage Gate): This point is associated with the hun (ethereal soul), the wood phase and the Liver. It can be used to treat depression, irritation, frustration, guilt, holding grudges, aggression, accusation, low self-esteem, anger, hostility, lack of

motivation, bitterness, boredom and apathy.

- Zhishi BL-52 (Will Chamber): This point is associated with the zhi (will), the water phase and the Kidney. It can be used to treat fear, lack of will power, terror, distrust, suspicion, panic and paranoia.

### 3. Ghost points

The ghost points were first collectively referred to in the classic *Bei Ji Qian Jin Yao Fang* (Prescriptions Worth a Thousand in Gold for Every Emergency) by Sun Si-Miao in the Tang Dynasty. The ghost points represent a systematic approach to treating mental diseases with acupuncture, especially severe and complicated cases. There are thirteen Ghost points in total, although it is not necessary to apply all of these points in treatment. Based on our clinical experience, we recommend treatment of ghost points as part of the treatment of post-COVID-19 neuropsychiatric conditions; we particularly recommend Shaoshang LU-11 (Ghost Faith), Yinbai SP-1 (Ghost Fortress) and Daling P-7 (Ghost Heart).

**We recommend treatment of ghost points as part of the treatment of post-COVID-19 neuropsychiatric conditions.**

The above three-step procedure is aimed at harmonising the three aspects of xing, qi and shen when there is neuropsychiatric pathology due to COVID-19. We advise following

the three steps when selecting acupoints for treatment. However, it is not necessary to use all points in all categories in every treatment. Flexibility with differential diagnosis and awareness of the patient's condition and response should always be prioritised as part of the core philosophy of TCM practice.

### Case report 1

**K, male, 50 years old, self-employed.  
Main complaint: depression and anxiety for three months.**

K called the clinic in mid May 2020, and we had an online consultation. K felt stressed. During the pandemic lockdown, when the number of confirmed infections and deaths were increasing, he developed the habit of watching the news on TV for updated numbers every day, even every hour at one point. The bad news affected his mood, and he started to experience fearful thoughts about his own death. This turned into depression, anxiety and panic attacks. His sleep had been very poor in the previous three months, disturbed by dreams and



frequent waking. His stomach felt full and bloated, with lots of belching. His bowel movements were irregular, with loose stools. He often experienced acid reflux rising up to his throat. He reported no fever, cough, change of smell and taste or body aches.

His tongue was pale red in colour and slightly swollen, with a slightly yellow coat that was thicker in the centre. The pattern differentiation was disturbance of the Heart and shen, and Spleen qi deficiency.

The herbs prescribed were based on *Shen Ling Bai Zhu San* (Ginseng, Poria and White Atractylodes Powder) and *Tian Wang Bu Xin Dan* (Emperor of Heaven's Special Pill to Tonify the Heart), as follows:

Ren Shen (Ginseng Radix) 2g  
 Bai Zhu (Atractylodis macrocephalae Rhizoma) 1.5g  
 Fu Ling (Poria) 1.5g  
 Shan Yao (Dioscoreae Rhizoma) 1.5g  
 Huang Qi (Astragali Radix) 1.5g  
 Lian Zi (Nelumbinis Semen) 1g  
 Sha Ren (Amomi Fructus) 1g  
 Yi Yi Ren (Coicis Semen) 1g  
 Dan Shen (Salviae Miltiorrhizae Radix) 1g  
 Yuan Zhi (Polygalae Radix) 1g  
 Dang Gui (Angelicae sinensis Radix) 1g  
 Wu Wei Zi (Schisandrae Fructus) 1.5g  
 Tian Men Dong (Asparagi Radix) 1.5g  
 Bai Zi Ren (Platycladi Semen) 1g  
 Xiang Fu (Cyperis Rhizoma) 1g  
 Zhi Gan Cao (Glycyrrhizae Radix preparata) 1g.

The above herbs were prescribed as concentrated powders, with the amount listed above as one daily dose. The formula was prescribed for seven days.

After taking the herbs for one week, the patient reported that his bowel movements were more formed, but his poor sleep and anxiety had not changed. With the reopening of the clinic after lockdown, K booked in for acupuncture treatment from early June, at a frequency of once every one or two weeks. The acupuncture points selected, according to category, were:

- Adjustment of xing: Zhongwan REN-12, Xiawan REN-10, Qihai REN-6, Guanyuan REN-4 (all tonifying technique) to reinforce Spleen qi;
- Regulation of qi: Zusanli ST-36 (tonifying technique) and Taichong LIV-3 (reducing technique) to tonify and regulate qi and blood;
- Stabilisation of shen: Spirit-Emotion scalp area, Baihui

DU-20, Shenting DU-24, Yintang M-HN-3, Shenmen HE-7 (all even technique) to regulate the shen.

After a total of three sessions of acupuncture over five weeks, his sleep and anxiety improved significantly. His negative thinking also reduced, and was not as persistent as before he started treatment. His appetite was also much better and bowel movements became almost normal. His treatment is ongoing.

## Case report 2

**N, female, 62 years old, retired teacher.**  
**Main complaint: physical weakness, panic attacks and sadness for over two months since the pandemic started.**

At the end of February 2020, N and her husband attended a school arts exhibition, where they met two friends of their daughter's from Italy. A few days later the couple developed mild fever, cough and muscle pain, while their daughter showed no sign of discomfort. They felt very tired. They became sick at the time when the number of confirmed cases of COVID-19 in Belgium was steadily rising. The couple decided to visit their doctor for a consultation, but, due to the relatively mild symptoms they were experiencing, failed to be admitted to the hospital for testing. They were given no choice but home isolation without any treatment. Following the pandemic announcement by the World Health Organisation on 12<sup>th</sup> March 2020, Belgium applied a full nationwide lockdown on 18 March 2020.

The couple started to suffer from more severe cough and weakness, especially N. With the physical weakness getting worse, N started to experience shortness of breath, chest discomfort, sweating even on slight exertion, poor appetite and insufficient energy to do even light house work. She also developed mental and emotional disturbance, including anxiety, panic, dwelling on fearful thoughts that she and her husband were dying, sadness, insomnia, waking early, along with headaches in the occipital region. All these symptoms were worsened by the circumstances of lockdown, with the associated isolation and lack of treatment. She lost four kilograms in weight in six weeks.

On 20th April, she came to the clinic with the complaints listed above, along with pale complexion, weak voice, dry non-productive cough, poor appetite, weak and sore lower back, poor concentration and urination once or twice a night.

**After the first visit, she felt much calmer, her chest felt much easier and her sleep was greatly improved.**

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Her tongue was pale with a thin coating and toothmarks at the edges. Her pulse was thready and weak, especially in the distal (Lung) and proximal right (Kidney) positions. Her TCM diagnosis was deficiency of Lung and Kidney qi with shen disturbance.

She was treated with acupuncture, as follows:

- Adjustment of xing: Lieque LU-7 plus Zhaohai KID-6 with even method; Zhongfu LU-1, Taiyuan LU-9, Taixi KID-3 with tonifying method;
- Regulation of qi: Neiguan P-6, plus Gongsun SP-4 with even method; Guanyuan REN-4, Qihai REN-6, Zusanli ST-36 with tonifying method; Shaoshang LU-11 plus Yinbai SP-1 with even method;
- Stabilisation of shen: Shaohai HE-3 and Shenting DU-24 with reducing method.

Explanation: The confluent points of the Conception and Penetrating Vessels were used to relax the chest, support the Lung and Kidney and relieve the obstruction of the yang by the pathogenic factors. Zhongfu LU-1 and Taiyuan LU-9, the front-mu and yuan-source points of the Lung, tonify the Lung and reinforce qi, regulating the Lung to ease sadness. Taixi KID-3, Guanyuan REN-4 and Qihai REN-6 tonify the qi of the Kidney and strengthen the body generally, helping the Kidney house the zhi and easing anxiety and fear. Shaoshang LU-11 and Yinbai SP-1, two of the 13 ghost points, were used together with Shenting DU-24 to eliminate disturbance of the shen due to the external epidemic pathogens. Shaohai HE-3, the he-sea point of the Heart channel, was used to calm the Heart and regulate the shen.

Acupuncture treatment was given once a week. After the first visit, she felt much calmer, her chest felt much easier and her sleep was greatly improved. She said she no longer felt anxious and fearful. However, she still felt tired. I gave her four sessions of weekly acupuncture treatment in total. By the end of the course her emotions were almost normal, and her energy levels had improved significantly. She then continued to come once every two weeks for maintenance.

As a postscript to this case, this patient's COVID-19 antibody blood test in June came back negative, although her husband's was positive. Whilst confusing, this strongly implies the likelihood of SARS-CoV-2 infection within the family.

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## Conclusion

Xing, qi and shen are three closely interacting aspects of the human being. Shen determines our mental state and response to emotional influences, affects the movement of the qi and interacts with the xing. Qi moves constantly in the body to connect the shen and xing. Xing provides essential substances to support the function of qi and shen. The state of the xing determines the reaction of the shen (and thus emotional suffering) as well as the restoration of impaired qi. COVID-19 causes not only physical but psychological and neuropsychiatric challenges due to its effect on the xing, qi and shen. Acupuncture, based on a complex strategy of adjusting xing, regulating qi and balancing shen, is a promising treatment for the psychological and neuropsychiatric symptoms of post COVID-19. 参考文献

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## Acknowledgements

**Liuzhong Ye**, PhD, Master of TCM (Guangzhou University of TCM), started practising TCM in the UK after graduating from Guangzhou. He is supervisor of the TCM Master and PhD courses at Shulan College (Manchester, UK), which is associated with Nanjing University of TCM, China.

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## Endnotes

1. Mental Health UK (2020). Managing your mental health during the coronavirus outbreak, available at <<https://mentalhealth-uk.org/help-and-information/covid-19-and-your-mental-health/>> [Accessed 31/03/20]
2. Matthews, S. (2020). Coronavirus patients can suffer from shortness of breath and fatigue for MONTHS after their battle with the disease, government scientists warn, Available at <<https://www.dailymail.co.uk/news/article-8375747/Coronavirus-patients-suffer-shortness-breath-fatigue-MONTHS.html>> [Accessed 31/03/20]
3. Kępińska, A.P., Iyegbe, C.O., Vernon, A.C. et al. (2020). Schizophrenia and Influenza at the Centenary of the 1918-1919 Spanish Influenza Pandemic: Mechanisms of Psychosis Risk, *Front. Psychiatry*, 11, p. 72, doi.org/10.3389/fpsyt.2020.00072
4. Rogers, J.P. (2020). Psychiatric and neuropsychiatric presentations associated with severe coronavirus infections: a systematic review and meta-analysis with comparison to the COVID-19 pandemic, *Lancet Psychiatry*, 7(7), pp. 611–627
5. Lewnard, J.A., Lo, N.C. (2020). Scientific and ethical basis for social-distancing interventions against COVID-19, *Lancet Infect Dis*, 20(6), pp. 631–633
6. Brooks, S.K., Webster, R.K., Smith, L.E. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence, *Lancet*, 2020;395, pp. 912–920
7. Greenberg, N., Docherty, M., Gnanapragasam, S. et al. (2020). Managing mental health challenges faced by healthcare workers during covid-19 pandemic, *BMJ*, doi: <https://doi.org/10.1136/bmj.m1211>
8. Chaves, C., Castellanos, T., Abrams, M. et al. (2018). The impact of economic recessions on depression and individual and social well-being: the case of Spain (2006–2013), *Soc Psychiatry Psychiatr Epidemiol*, 53, pp. 977–986
9. Xiang, Y., Yang, Y., Li, W. (2020). Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed, *Lancet Psychiatry*, 7, pp. 228–229.
10. Siu, J. (2008). The SARS-associated stigma of SARS victims in the post-SARS era of Hong Kong, *Qual Health Res*, 18, pp. 729–738
11. Jones, C., Humphris, G.M. & Griffiths, R.D. (1998). Psychological morbidity following critical illness—the rationale for care after intensive care, *Clin Intensive Care*, 9, pp. 199–205
12. Mao, L., Jin, H. & Wang, M. (2020). Neurologic manifestations of hospitalized patients with coronavirus disease 2019 in Wuhan, China, *JAMA Neurol*, 77(6), pp. 683–690
13. Helms, J., Kremer, S. & Merdji, H. (2020). Neurologic features in severe SARS-CoV-2 infection, *N Engl J Med*, 382, pp. 2268–2270
14. Lechien, J.R., Chiesa-Estomba, C.M. & De Siati, D.R. (2020). Olfactory and gustatory dysfunctions as a clinical presentation of mild-to-moderate forms of the coronavirus disease (COVID-19): a multicenter European study, *Eur Arch Otorhinolaryngol*, 277(8), pp. 2251–2261
15. Chen, G., Wu, D., Guo, W. et al. (2020). Clinical and immunological features of severe and moderate coronavirus disease 2019, *J Clin Invest*, doi: 10.1172/JCI137244
16. Zhang, H., Penninger, J.M., Li, Y. et al. (2020). Angiotensin-converting enzyme 2 (ACE2) as a SARS-CoV-2 receptor: molecular mechanisms and potential therapeutic target, *Intensive Care Med*, 46, pp. 586–90
17. Zou, X., Chen, K., Zou, J. et al. (2020). Single-cell RNA-seq data analysis on the receptor ACE2 expression reveals the potential risk of different human organs vulnerable to 2019-nCoV infection, *Front Med*, 14(2), pp. 185–192
18. Lv Q., Yang Q., Cui Y. et al. (2017). Effects of Taurine on ACE, ACE2 and HSP70 expression of hypothalamic-pituitary-adrenal axis in stress-induced hypertensive rats, *Adv Exp Med Biol*, 975(Pt 2), pp. 871–86
19. Ding Y., He L., Zhang Q. et al. (2004). Organ distribution of severe acute respiratory syndrome (SARS) associated coronavirus (SARS-CoV) in SARS patients: implications for pathogenesis and virus transmission pathways, *J Pathol*, 203, pp.622–30
20. See <<https://www.easterncurrents.ca/for-practitioners/practitioners%27-news/eastern-currents-news/2017/05/01/a-curious-organ---the-gallbladder>> [Accessed 15/09/20]
21. See <<https://www.sciencedaily.com/releases/2016/11/161113154748.htm>> [Accessed 15/09/20]
22. See <<https://rcni.com/nursing-management/opinion/comment/covid-19-psychological-support-healthcare-workers-during-and-after-pandemic-160991>> [Accessed 15/09/20]
23. For details about treatment for COVID-19 according to these stages see Sun, P.L & Zhou, W.S. (2020). Acupuncture in the Treatment of COVID-19: An Exploratory Study. *Journal of Chinese Medicine*, 123, pp. 14–20
24. Hao J.J. & Hao L.L. (2011) *Chinese Scalp Acupuncture*. Blue Poppy Press: Boulder

# Infertility Has Been Cured By Acupuncture with Natural Pregnancy

Yonggang Han

## Case One

Mrs M S, date of birth: 4th March 1980, who is an accountant.

She was diagnosed as Primary infertility, Perimenopause, Hypothyroidism, Left fallopian tube obstruction. Her Anti-Mullerian Hormone was 2.4pmol/L in May 2017 which it showed insufficient ovarian reserve. She had a total of three IVF treatments failed in November 2017, January 2018, and May 2018. She was taking Levothyroxine 75mcg. Her menstrual cycle is irregular, ranging from 26 days to 43 days, the average period is 40 days, and the menstrual period is 6 to 7 days. She had moderate menstrual volume, a few blood clots, breast tenderness and abdominal distension in the premenstrual period. She wake up easily; feel anxiety and depression; poor memory; fatigue; constipation, defecation every 1 to 3 days; cold limbs. Tongue examination: pale red tongue, thin white coating. Pulse examination: Two feet are too deep to feel. Diagnosis of TCM Syndrome: Yin and Yang deficiency.

From 20th June to 3rd October, about three and a half months, a total of 10 acupuncture treatments. Her menstrual cycle gradually became regular, from an average of 40 days to 32 days, 26 days, and 29 days. Her physical and mental state was getting better and better, and she had a natural pregnancy in October.

On 8th October 2018, she sent a message to confirm the natural pregnancy. On 12th October 2018, during her last follow-up visit, she said that she and her husband were very pleasantly surprised and thanked me for helping her avoid the pain of IVF treatment.

She had her first baby in mid-June 2019. In February 2020, she came back to me as she would like to grow her family.

## Case Two

Mrs N J, Date of birth: 16th June 1984, NJ works in marketing.

She was diagnosed as Polycystic Ovary Syndrome. The ultrasound scan in December 2017 confirmed it. Her period is irregular, ranging from 28 days to 48 days, and the menstrual period is 4 to 5 days.

Tongue examination: dull red tongue, thin white coating.

Pulse examination: the pulse in the middle of the right hand is forceful, two Chi positions are hard to feel.

From November 2018 to June 2019, after 7 months of treatment, a total of 16 sessions of acupuncture, she became pregnant naturally. She sent me the photo of pregnancy test 16th June 2019. Then she sent me the photo of an ultrasound scan to show her baby is 12 weeks and 5 days.



### Explanation and Discussion

I tend to combine acupuncture and Chinese medicine at the beginning of treatment. However, both women were unwilling to take Chinese medicine, and they prefer to take acupuncture only.

Scalp acupuncture is very helpful to improve the mental state of patients. Fuke and HuanChao points are particularly effective acupoints for treating infertility with Dong's extraordinary Points.

<<'The Medical Classic of the Yellow Emperor'>>"

Whenever acupuncture is to be used, and the pulse must be diagnosed first, and the treatment can be started by figuring out the excessive and insufficient Qi of the different me

ridians." The selection of acupuncture Couple points in Spirit Acupuncture depends on the patient's pulse. Therefore, the patient's pulse must be carefully

checked before choosing the right acupoint, so as to understand which meridians of the patient have too much negative energy and which meridians have too little positive energy.

### Conclusion

The combined application of multiple acupuncture techniques is the key to the success of infertility.

The fact has shown that acupuncture alone can also cure difficult infertility without the use of drugs.



# Support complicated cases in ART with Acupuncture and Chinese medicine

Mrs Qing Zhang

Increasingly, couples are turning to assisted reproductive technology (ART) to help with conceiving and ultimately giving birth to a healthy baby. Despite their variable success rates, some women turn to Acupuncture for help, especially those with complicated conditions. Acupuncture and Chinese herbs are useful for supporting ART, as it may increase the chance of getting pregnant for women undergoing fertility treatment and prevent miscarriage afterwards.

## Case One

E, hair dresser, 42 years old. She tried to have a baby for the last 4 years with no success. Her period was 4-5 /28 per cycle, after 40 years old, her period was 3/28, light period, PMS starts badly 3-5 days before periods. Her fallopian tubes were blocked; she had 2 IVF, but all failed. She had one pregnancy when she was 26 years old. She came to my clinic to prepare for the next IVF.

Pattern differentiation: Liver and Kidney Yin deficiency, Qi and Blood deficiency, Liver Qi stagnation, penetrating vessel and Conception vessel are weak and disharmony.

TCM treatment principle: replenish kidney and liver Yin, move Blood and remove Blood stasis; smooth and activate Liver Qi; nourish and regulate Penetrating vessel.

Acupuncture points: Qi Hai(CV5), Gua Yuan(CV4), Zhong Ji(CV 3), Zi Gong(Ex-CAI) , Gui Lai( ST 29), Zu San Li(ST 36), San Yin Jiao(SP6), Zhao Hai (KI 4), Xue Hai (SP10), Nei Guan( PC 6), He Gu(CO4), Tai Chong (LR 3), Bai Hui(G20), Da Zhui(GV14), Shen Ting (GV24).

Chinese herbs: Tao Hong Si Wu Tang, Gui Shao Di Huang Tang, Bu Zhong Yi Qi Tang, Yu Lin Zhu, Jin Kui Shen Qi Wan. The patient had concentrated herbal granule. 5g each time, twice daily.

Observe and result: Two weeks after the first treatment, she was pregnant, but the pregnancy did not last, she had a miscarriage. Then she started IVF treatment, 7 eggs were collected, and 6 developed into embryos, 2 embryos were transferred, but it failed. She stopped her treatment. She came back again a few months later, in the time between, she had one IVF aboard, she had one embryo transferred, and it did not work. She was preparing another IVF in a few weeks. From my experience with her, I added Ba Liao points with electric acupuncture, and Bai Hui, Shen Ting to regulate her Jing Qi Shen (精，气，神). Some local points for her ultras and ovaries' function. I used stronger herbs, added Shi Quan Dabu Tang to tonic her penetrating vessel and Conception vessel, Xue Fu Zhuyu Tang to remove Blood stasis. I also suggested her to ask her gynaecologist's permission to carry on with herbs during he

# 对“得气”和“气至”概念的拨乱反正

Corrections for the concepts: De Qi/getting Qi and Qi Zhi/Qi arrival

韩永刚

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**摘要：**回归经典，正本清源。针感是患者在针刺过程中酸麻胀痛的主观感受；“气至”和“得气”是医生通过望诊、脉诊、触诊获得的客观体征；“气至”是指针刺前后医生诊查到的脉象的变化，即“补则实、泻则虚”的“谷气至”；“得气”是指刺中气穴，从而“针与经气相得”；欲“得气”，需要强调“候气”和“揣穴”；“得气”反应包括针下的沉涩紧、跳动感，针体的颤动、摇摆，以及“针下热”、“针下寒”在内的多种气化反应；不“得气”，当“催气”，力求“气至病所”；“用针之类，在于调气”；“凡刺之道，气调而止”，毫针调气法是中医上工所掌握的最高明的治疗技术。

**关键词：**针感；得气；气至；谷气；候气；揣穴；催气。

一、“针感”不等同于“得气”和“气至”。

《简明中医辞典》对“得气”的解释：“得气是针刺进针后使针刺部位产生经气感应的手法，又称为针感”<sup>[1]</sup>。“十一五”国家规划教材《刺灸学》认为：“得气又可称为气至，现代又称针感或针刺感应”<sup>[2,3]</sup>。《刺灸法医学》也持相同观点，是指针刺穴位后，患者针刺部位出现酸麻胀痛的感觉”<sup>[4]</sup>。在以上定义中，“针感”、“得气”和“气至”是一样的，都属于患者的主观感受，与医生无关。患者的主观的针感有酸、麻、胀、重、凉、热、触电感、跳跃感、虫爬蚁走感等等。这些感觉的性质与针刺部位密切相关。例如针刺到肌肉、肌腱、关节、骨膜等部位则产生酸、胀、沉重等感觉；针刺到神经附近则产生麻感；针刺到神经干则发生触电感；针刺到毛囊、血管及四肢末端敏感部位则多出现痛感等等<sup>[3]</sup>。目前国内外关于得气的量化评价也主要侧重于患者的主观感受，“针刺主观感受量表”（Subjective acupuncture sensation scale, SASS）是目前得气的主要量化方法，很少有评价医师手下、针下的得气量表<sup>[5]</sup>。

实际上，患者主观的“针感”与中医经典中的“得气”、“气至”并不一样，也就是说现代把“针感”等同于“得气”、“气至”，是曲解了古圣先贤的本意。这很可能源于清末（1839-1912）江上外史撰《针灸内篇》，凌氏传人在记述凌云的学术观点时曰：“凡针入穴，宜渐次从容而进，攻病者，知酸知麻

知痛，或似酸似麻似痛之不可忍者即止”。民国时期著名针灸学家承淡安《中国针灸治疗学》言：“医家运针，必待气至，病者觉针下酸重，医者捻动针柄亦觉针下沉紧之象是也”；“凡针下若气不至，用指于所属部分、经络上下左右循之，使血气往来上下均匀，针下气者沉紧，得气即泻之故也”<sup>[6]</sup>。但是把针感等同于“得气”、“气至”，则无法解释无需得气的针法，例如激光针、腕踝针、皮内针、嵌针、浮针、腹针、耳针、头针等，患者主观上没有出现明显的针感，却仍然有良好的疗效，用“隐性得气”、“阈下刺激”的假说也很难说得通。实际上在中医经典中，“得气”、“气至”是医生在治疗过程中诊查到的气的客观变化，与患者的酸麻胀痛的主观感受无关。

经典中医以气一元论的三分法为哲学基础，气是构成宇宙万物的本原，气的运动是物质世界存在的基本形式<sup>[7]</sup>。中医理论认为所有的疾病都与气相关，故《黄帝内经·素问·举痛论》曰：“余知百病生于气也”。在针灸治疗中，“得气”和“气至”的核心都是“炁”，用现代语言来说气是能量和信息，是以场、波等形式存在的能量，大到宇宙，小到人体，气的运动变化就是能量的不同存在形式。同时，中医有着“象思维”的特点。气的运动变化可以通过各种“象”来观察到，天地之间气的变化可以通过气候、物候等“象”来观察到，人之气则可以通过“象”借助视觉、触觉等感官来观察到。中医医

生就是通过望诊、脉诊、触诊来观察患者的各种“象”，面象、脉象、针象，从而诊查患者气的变化。

二、“气至”是指针刺前后医生诊查到的脉象的变化，即“补则实、泻则虚”的“谷气至”。

“气至”一词出现在《黄帝内经》中的多个篇章，但是明确指出何谓“气至”，则是在《黄帝内经·灵枢·终始》曰：“所谓气至而有效者，泻则益虚，虚者，脉大如其故而不坚也；坚如其故者，适虽言故，病未去也。补则益实，实者，脉大如其故而益坚也；夫如其故而不坚者，适虽言快，病未去也。故补则实、泻则虚，痛虽不随针，病必衰去。”在这一篇，“气至”有明确的内涵：针灸前脉象太过而实，通过针灸的泻法，脉象就虚了，这就是气至；针灸前脉象不及而虚，通过针灸的补法，脉象就实了，这就是气至。简单来讲，《黄帝内经》对“气至”的定义就是脉象的变化，也就是通过针灸的补泻，虚则补之，实则泻之，使原来的实脉（有力）变虚（力量减弱），原来的虚脉（无力）变实（力量增强），达到“六脉若一”的正常状态<sup>[7]</sup>。脉象的改变显示人体气的变化，气的运动恢复正常，则人体的功能恢复正常，症状也得以减轻，疾病向愈，即所谓“痛虽不随针，病必衰去”。

脉是人体气的窗口，故《黄帝内经·灵枢·经脉》曰：“经脉者常不可见也，其虚实也，以气口知之”。针灸前后患者脉象的客观变化，是医生通过脉诊检查、比较之后发现的。《黄帝内经·灵枢·九针十二原》曰：“凡将用针，必先诊脉，视气之剧易，乃可以治也。”提示在针灸治疗之前需要诊脉。针灸之前诊脉是为了明确诊断，知道“气之剧易”，也就是脏腑经络气之虚实，然后可以据此来补泻。《黄帝内经·灵枢·小针解》曰：“所谓虚则实之者，气口虚而当补之也。满则泄之者，气口盛而当泻之也”。“气口”就是“脉口”，也就是寸口脉，根据脉诊得出的虚实来做相应的补泻，虚则补之，实则泻之。而补泻之后，脉象就会发生相应变化。故《黄帝内经·灵枢·小针解》曰：“为虚为实，若得若失者，言补者必然若有得也，泻则恍然若有失也”。施用补法后，病人的脉象变强，如同有所收获；施用泻法后，病人的脉象变弱，如同有所损失。《难经·七十九难》也明确指出虚实、得失是脉象的客观变化，而不是患者的主观感觉：“所谓实之与虚者，牢濡之意也，气来实者为得，濡虚者为

失，故曰若得若失也。”脉象变实，如同有所得；脉象变虚，如同有所失。

另外，医生需要诊脉来判断正气和邪气之盛衰。《黄帝内经·灵枢·终始》曰：“邪气来也紧而疾，谷气来也徐而和。”邪气亢盛，则正邪交争剧烈，则脉象急数，并且有紧张感，所谓“邪气来也紧而疾”；如果正气充盛，没有邪气的侵扰，则脉象不快不慢，如闲庭散步，此所谓“谷气来也徐而和”。

《黄帝内经·灵枢·终始》曰：“凡刺之道，气调而止”。《黄帝内经·灵枢·九针十二原》曰：“刺之而气不至，无问其数。刺之而气至，乃去之，勿复针”。指出没有“气至”，需要继续治疗直至“气至”；“气至”之后则可以停止治疗。而判断是否“气至”，还是根据脉象。针灸之后再次诊脉是为了确认疗效。再次诊脉，医生发现患者的脉象发生了“虚而实之，实而虚之”的变化，即“补则实、泻则虚”的变化，这就是“气至”，从而验证医生的治疗有效，患者的病情一定是向好的方向变化，这就是《终始》篇所谓“痛虽不随针，病必衰去”。相反，如果患者的症状虽然减轻，但是医生诊查脉象并没有发现明确的“虚而实之，实而虚之”的变化，说明治疗并没有对患者产生根本性的效果，即时效应的症状改善就只能是暂时性的，这就是《终始》篇所谓的“坚如其故者，适虽言快，病未去也”，“夫如其故而不坚者，适虽言快，病未去也”。综上所述，判断“气至”与否的标准是以针刺前后医生所观察到的脉象的变化作为依据。《黄帝内经·灵枢·终始》曰：“故一刺则阳邪出，再刺则阴邪出，三刺则谷气至，谷气至而止。所谓谷气至者，已补而实，已泻而虚，故以知谷气至也”。经过针刺补泻，患者的脉象发生了“虚而实之，实而虚之”的变化，“气至”就是医生通过诊查针刺前后患者脉象的变化而体察到的“谷气至”。

同时，“气至”即针刺前后脉象的变化是针刺疗效的客观指标<sup>[8,9]</sup>。《灵枢·九针十二原》曰：“刺之要，气至而有效。效之信，若风之吹云，明乎若见苍天，刺之道毕矣！”医生只要明确诊查到这一客观指标，临床疗效一定是立竿见影，效如桴鼓。

三、“得气”是指刺中“气穴”，“针与经气相得”，是医生通过望诊和触诊观察到的客观变化。

1. 欲“得气”，先“候气”，等待最好的针刺时机。

《黄帝内经·灵枢·小针解》曰：“要与之期者，知气之可取之时也。”针灸不是一上来就扎针，既不能盲目进针，又不能坐失良机。《黄帝内经·灵枢·刺节真邪论》曰：“用针者必察其经脉之虚实，切而循之，按而弹之，视其动应者乃后取之。”《灵枢·卫气》亦曰：“取此者，用毫针，必先按而在久，应于手，乃刺而予之”。通过望诊和触诊发现了气的运动之后才开始针刺，这就是所谓的“视其动应者”、“应于手”的“候气”过程。那么为什么要“候气”呢？《黄帝内经·素问·离合真邪论》曰：“候气奈何？歧伯曰：夫邪去络入于经也，舍于血脉之中，其寒温未相得，如涌波之起也。时来时去，故不常在”。气的运行如同潮起潮落，有高潮和低谷，不是一直都表现的很明显，这就需要医生耐心等待和仔细观察，等待最好的针刺时机，此所谓“候气”。《难经·七十八难》曰：“知为针者，信其左；不知为针者，信其右。当刺之时，先以左手压按所针荣俞之处，弹而努之，爪而下之，其气之来，如动脉之状，顺针而刺之。”扁鹊强调，在针刺操作中押手的作用比刺手更加重要。通过押手的揣穴和候气，发现类似脉搏一样的气的运动，然后才予以针刺。后世的针灸大家也都强调押手候气的重要性。例如金元针灸大家窦汉卿《针经指南·标幽赋》指出：“左手重而多按，欲令气散；右手轻而徐入，不痛之因”左手是押手，主候气；右手是刺手，主进针。元代王国瑞《扁鹊神应针灸玉龙经·注解标幽赋》曰：“指弹其穴，穴下气轻滑慢，气未至也，勿刺。待气至，方可刺也。”并做出了具体形容“气至穴下，若鱼吞钩，若蚁奔走，或浮或沉也。穴下气不至，若虚堂无人，刺之无功，不可刺也”。明代杨继洲《针灸大成·卷六》：“用针之法，以候气为先。须左指闭其穴门，心无内慕，如待贵人，伏如横弩，起若发机”。明代汪机《针灸问对》云：“谓当刺时，先以左手压、按、弹、努、爪、切，使气来如动脉应指，然后以右手持针刺之。”从理论上讲，如果能够结合子午流注、循经按时开穴法，临床效果应该能够事半功倍。

2. “得气”首先要刺中“气穴”，而非肉节，强调和重视“揣穴”。

《黄帝内经·灵枢·四时气》曰：“四时之气，各有所在，灸刺之道，得气穴为定”。《黄帝内经·灵枢·邪气藏府病形》曰：“黄帝曰：刺之有道乎？歧伯答曰：刺此者，必中气穴，无中肉节。中气穴则针游于巷，中肉节即皮肤痛”。指出针刺的一个重要的技术环节就是不能引起患者皮肤痛的反应，

因为那样只是标志着针刺在了肉节上，而不是气穴上，从而引起患者疼痛感，而这是错误的。《灵枢·胀论》亦云：“不中气穴，则气内闭；针不陷育，则气不行；上越中肉，则卫气相乱，阴阳相逐”。说明没有刺中气穴，反而刺中了肉节，会引起气机逆乱，属于临床误治。如果准确地刺中了气穴，进而得气，则会出现针刺的巡经感传现象或者患者会出现气机在人体循行的气化反应，此所谓“中气穴则针游于巷”。可见，“中气穴”是“得气”的先决条件。无痛进针法是针灸师应该掌握的最基本的操作技术。

为了精准地刺中“气穴”，临床上必须重视“揣穴”，故《黄帝内经·灵枢·经水》曰：“审、切、循、扪、按，视其寒温盛衰而调之，是谓因适而为之真也”。“揣穴”的相关内容散见于《黄帝内经》多个篇章。例如，《灵枢·五邪》曰：“取之膺中外出，背三节五藏之傍，以手疾按之，快然，乃刺之。”《灵枢·癫狂病》曰：“咳而动手者，与背输，以手按之，立快者是也。”《灵枢·杂病》曰：“心痛，当九节刺之，按，已刺按之，立已；不已，上下求之，得之立已。”针灸高手往往强调“穴位是活的”，教科书上穴位的位置只是理论上的位置，具体到某一个患者，会有差异性。因此，要用押手在理论上穴位的上下左右仔细地揣穴，以手按之，往往能缓解患者的痛苦，此所谓“快然”和“立快”，这才是真正的穴位。再针刺真正的穴位，效果往往立竿见影，此所谓“立已”。

3. “得气”是气至针下，从而“针与经气相得”，最典型的“得气”反应是通过医生的触诊观察到的“沉涩紧”和“跳动感”。

宋代针灸名医窦汉卿《针经指南·标幽赋》，对“得气”时医生手下的感觉作了形象的描述：“轻滑慢而未来，沉涩紧而已至。既至也，量寒热而留疾；未至也，据虚实而候气。气之至也，如鱼吞钩饵之沉浮；气未至也，如闲处幽堂之深邃”。明代张景岳《类经》曰：“若气不潮针，则轻滑不知疼痛，如插豆腐，未可刺也。必候神气既至，针下紧涩，便可据法施用。入针后轻浮虚滑迟慢，如闲居静室、寂然无闻者，乃气之未到；入针后沉重涩滞紧实，如鱼吞钩、或沉或浮而动者，乃气之已来。”杨继洲《针灸大成》亦云：“若气不朝，其针轻、滑不知疼痛，如插豆腐；如神气至，针自紧涩”。没有“得气”的表现“轻滑慢而未来”、“如插豆



腐”、“似闲处幽堂之深邃”，即医生的刺手和押手感觉轻松、虚滑，如同没有对手一样无处发力，又犹如身在幽暗空旷的殿堂，深邃宁静。而“得气”的表现为“沉涩紧”、“针自紧涩”、“如鱼吞钩饵之沉浮”，即医生的刺手和押手感觉沉重、干涩、紧实，或者感到跳动或蠕动，又或者如同钓鱼时鱼儿吞钩饵、一沉一浮。

需要指出的是，这种“沉涩紧”的触诊感觉要与因手法不当引起疼痛而造成局部肌肉痉挛或滞针严格区别开。陆庵医生认为扎跳就是“得气”，影响最大的莫过于王岱的“跳动穴”学说。王氏称针刺某些穴位可引起肢体跳动或穴位处的肌肉抽动，认为此种跳动现象是针刺得气的重要标志，其所用穴位有尺泽、环跳、殷门、曲池、三阴交、阳陵泉、光明等。王淑娟也提出跳动得气的概念，并指出这些穴位多在肌肉丰厚处，位于两块肌肉之间，且越靠近肌腹越易产生跳动即位于肌腹上，这些论述和触发点理论接近<sup>[10]</sup>。

4. “得气”的另一类反应是通过医生的望诊观察到的“针象”，即针体的颤动、摇摆等。

《难经·七十八难》曰：“当刺之时，必先以左手厌按所针荣俞之处，弹而努之，爪而下之，其气之来，如动脉之状，顺针而刺之”。通过押手的操作，医生体察到“气至手下”，然后针刺，就很容易“得气”。而“得气”之后另外的一大类反应是针灸针出现节律性或者非节律性的颤动和摇摆。针体摆动与脉搏相一致者，多为受到了附近动脉的影响，这就是所谓的“其气之来，如动脉之状”；非节律的震颤者则多为肌肉痉挛或抽搐而引起。

5. “得气”之后需要“守气”。

“守气”就是守住已得之气。《黄帝内经·素问·宝命全形论》曰：“刺虚者须其实，刺实者须其虚，经气已至，慎守勿失”。就是说即使在针刺“得气”后，医生也要小心谨慎，免得失去已经得到的气。《黄帝内经·素问·针解》进一步做了解释：“经气已至，慎守勿失者，勿变更也”。“勿变更也”就是“得气”后就不要做更多的手法，免得画蛇添足，适得其反。另外，《黄帝内经·灵枢·终始》曰：“男内女外，坚拒勿出，谨守勿内，是谓得气”。就是根据性别不同，男性宜深留针，在地部；女性宜浅留针，在天部。《太素》注曰：“针下得男内气，坚拒勿令出也；得女外气，谨守勿入内也。”在“得气”后需要保持这个状态，“坚拒勿出”就是不要

向外拔针，“谨守勿内”就是不要向内进行针，提示不做画蛇添足的手法，这样来保持“得气”的状态。

6. 不“得气”需要“催气”。

《黄帝内经·灵枢·终始》篇要求针刺留针首先要遵循“男内女外”的原则，也就是男子留针于地部，守营气；女子留针于人部，守卫气。皆因男属阳，女属阴；阳气入内，阴气出外，内外交通从而阴阳协调。清代张志聪注曰：“男为阳，女为阴。阳在外，故使之内；阴在内，故引之外，调和调外内阴阳之气也。坚拒其正气而勿使之出，谨守其邪气而勿使之入，是谓得气。”通过“男内女外”的针刺手法和留针守气，阳气入内，阴气出外，这样阴阳沟通而协调，阴阳交融。这也符合的经典中医针灸的根本精神，故《素问·阴阳应象大论》曰：“故善用针者，从阴引阳，从阳引阴”。

通过触诊和望诊的观察，如果没有以上所述“得气”的种种表现，这时就需要“催气”。首选方法是留针深浅层次的转换，正如同《难经·七十八难》所曰：“不得气，乃与男外女内”。不“得气”，就要把针从“男内女外”变为“男外女内”，也就是转变为男子留针于天部，守卫气；女子留针于地，守营气。元代滑伯仁注解：“若停针候气，久而不至，乃与男子则浅其针而候之卫气之分，女子则深其针而候之荣气之分。”针刺后浅部不得气，宜催气插针至深部；深部不得气，宜催气提针至浅部。留针深浅层次的转换，可以进一步引申为通过提插法来催气，也就是“天部-人部-地部”三部提插法，在此不再赘述。

《黄帝内经·素问·刺要论》曰：“病有浮沉，刺有浅深，各至其理，无过其道；过之则内伤，不及则生外壅，壅则邪从之。浅深不得，反为大贼，内动五藏后生大病。故曰：病有在毫毛腠理者，有在皮肤者，有在肌肉者，有在脉者，有在筋者，有在骨者，有在髓者”。邪深刺浅，不能中病；邪浅刺深，则反引邪深入，加重病情。根据疾病所在的层次，要特别注意针刺的深浅，严格来讲，要根据中医的“五体论”，即区分“皮、肉、脉、筋、骨”不同层次而针刺，力求做到“在骨守骨，在筋守筋。”这是经典中医内涵中的精准针灸。

如果不详细地区分“五体”，也可以简单粗略地划分为浅深两层来针刺，即浅刺卫气，深刺营气。《黄帝内经·灵枢·终始》曰：“脉实者深刺之，以泄



其气；脉虚者，浅刺之，使精气无写出，以养其脉，独出其邪气……阴也，深刺之。病在上者，阳也。病在下者，阴也。痒者，阳也，浅刺之。”《难经·七十六难》亦云：“当补之时，从卫取气；当泻之时，从荣置气”。病位浅，则在天部行针，即激发卫气，以捻转、震颤、循摄、爪切为主；病位深，则在地部行针，即激发营气，以提插法为主，而有效的提插法必须通过中层筋膜。

“催气”之后最佳的反应就是“气至病所”。《三国志·华佗传》记载“下针，言当引某许，若至，语人，患者言，已到，后便拔针，病亦行差”，就是对“气至病所”的生动描述。最简单的使“气至病所”的“催气”方法就是“针尖指向法”，即用平刺法或斜刺法，将针尖指向患处。汪机《针灸问对》曰：“得气，便卧倒针，候气前行，催气运至于病所”。杨继洲《针灸大成》曰：“转针向上气自上，转针向下气自下”。

“催气”的方法在后世做了极大的丰富和补充，演变为提插、捻转、震颤、循摄、爪切等等多种方法。杨继洲《针灸大成》曰：“凡下针，若气不至，用指子所属部分经络之路，上下左右循之，使气血往来，上下均匀，针下自然气至”。徐凤《金针赋》又提出了使针下之气通关过节，直达病所的飞经走气四法“若关节阻涩，气不过者，以龙虎龟凤通经接气。”“龙虎龟凤”即青龙摆尾、白虎摇头、苍龟探穴、赤凤迎源。张建强将常用针刺调气的手法总结为：循摄调气法、针向调气法、弹指调气法、按压调气法、运气调气法、推捻调气法、逼针调气法、捣针调气法、通关过节法、搓针调气法、添针调气法等十一种方法<sup>[11]</sup>。袁宜勤将常用针刺调气的手法总结为：循摄调气法、弹针调气法、针向调气法、按压调气法、押手按压法、推捻调气法、运气调气法、逼针调气法、捣针调气法、通关过节法、添针调气法、局部扩散法、搓针调气法等等十二种方法<sup>[12]</sup>。

7. “催气”之后仍然不能“得气”，需要考虑转换为艾灸、中药等其它治疗方法。

《难经·七十八难》曰：“不得气，乃与男外女内。不得气，是为十死不治也”。明代李梴《医学入门》曰：“针下轻浮虚活者，用弹、努、扞、循、引之；气犹不至，如插豆腐者死”。经过催气，仍然不能得气，说明患者正气极度虚弱，很难通过针刺的方法来激发，这时候应该考虑用艾灸、中药等其

它治疗方法来代替针刺。因为从补虚泻实的角度考虑，针刺虽然既可以补虚又可以泻实，但是其仍然以泻实为自身优势；而艾灸、中药的补益正气的效果天然要优于针刺法。

四、在“气至”、“得气”基础上出现的进一步的气化反应

1. “针下热”、“针下寒”的气化反应，就是后世所说的“烧山火”、“透天凉”。

《黄帝内经·素问·针解》曰：“刺虚则实之者，针下热也，气实乃热也。满而泄之者，针下寒也，气虚乃寒也……刺实须其虚者，留针阴气隆至，乃去针也。刺虚须其实者，阳气隆至，针下热乃去针也”。患者脉象属实，即有力，或者病位所在经络、穴位属实，即张力过大，通过针刺泻实的方法，“刺实须其虚者”，留针一段时间等到“阴气隆至”，患者往往会出现“针下寒”的气化反应，呈局部性或者全身性，这就是后世所谓的“透天凉”。

患者脉象属虚，即无力，或者病位所在经络、穴位属虚，即张力不足，通过针刺补虚的方法，“刺虚须其实者”，留针一段时间等到“阳气隆至”，患者往往会出现“针下热”的气化反应，呈局部性或者全身性，这就是后世所谓的“烧山火”。

无论是“烧山火”还是“透天凉”，都是通过针刺补泻，虚则实之，实则虚之，从而“谷气至”，即正气复、气机调的状态，也就是《黄帝内经·灵枢·终始》所述：“所谓谷气至者，已补而实，已泻而虚，故以知谷气至也”。

2. 其它的气化反应

(1) 放松感乃至疲倦感：患者在行针过程中入睡，自然醒来后觉得神清气爽；如果过早结束治疗，患者往往仍然感觉疲乏、困倦。

(2) 精神情绪类：患者的不良情绪得到释放，因而出现哭泣，或者直接表现为如释重负、轻松愉快感。

(3) 轻盈漂浮感和沉重下坠感。

(4) 皮表经络现象：循经出现红线、白线、丘疹带等。

(5) 气流感：呈局部性“气至病所”；或者呈全身性的气机流动感。需要指出的是，全身性的气流感，其循行方向往往并不是按照十二正经的流注次序，而是按照《黄帝内经·灵枢·逆顺肥瘦》“手之三阴，从藏走手；手之三阳，从手走头；足之三阳，从头走足；足之三阴，从足走腹。”并且，往往呈左右交叉八字型循行。具体细节可以参考潘晓川老

师《针灵》一书<sup>[7]</sup>。

(6) 内视现象：患者看到不同颜色的光或者能看到气的运行，类似于中医的经络循行和道家的“小周天”、“大周天”等等。

## 五、总结

将患者的酸麻胀痛的主观感受作为评判“得气”和“气至”的标准，是近现代针灸在理论和实践上的巨大错误，需要拨乱反正！而拨乱反正就需要回归经典，正本清源，发掘中医经典中蕴藏的真谛！

《黄帝内经》总结针刺的核心就是调整患者气机，是通过“调气”而达到“气调”。调气包括候气、守气、催气等手段，核心目的就是为了“得气”和“气至”，最终达到“气调”的状态。故《灵枢·刺节真邪论》曰：“用针之类，在于调气”；《灵枢·终始》曰：“凡刺之道，气调而止”。《黄帝内经》极其推崇毫针调气法，通过小小的毫针来调气，是“至巧”，即最高明的治疗手段，是中医上工必须掌握的，故《灵枢·根结》曰：“上工平气，中工乱脉，下工绝气危生”；《灵枢·卫气失常》亦曰：“随变而调气，故曰上工”。根据患者气的变化来“调气”，使之“气调”、“平气”，是中医上工之绝技。

经典中医有着“象思维”的特点。中医的望闻问切四诊，首重阴阳，故《素问·阴阳应象大论》曰：“善诊者，察色按脉，先别阴阳。”现实世界的复杂性可谓数不胜数，辨别阴阳可以通过“象”来以简驭繁，故《素问·五运行大论》曰：“夫阴阳者，数之可十，推之可百；数之可千，推之可万。天地阴阳者，不以数推，以象之谓也。”如上所述，经典中医通过脉象辨气至，针象、手下辨得气。经典中医的“得气”和“气至”，不是患者的酸麻胀痛的主观感受，而是医生通过望诊、脉诊、触诊而查到的客观体征，包括患者面象的变化，医生指下脉象的变化、刺手和押手下气的变化以及“针象”，即针体的颤动、摇摆等。通过这些客观体征，医生知道患者脏腑经络之气的变化，在治疗前明确诊断，补虚泻实，有的放矢；在治疗后可以确认疗效，验证治疗的有效性。

## 参考文献

- [1] 步凡. 浅谈对《内经》中针刺得气的几点体会. 四川中医. 2013, 31(4):18-20.
- [2] 刘小平, 陈飞宇, 包烨华, 等. 气至、气至而有

效、得气、针感的内涵与关系. 中医杂志. 2018, 59(17):1450-1452.

[3] 章庆庆, 朱世鹏, 罗丽, 等. 得气内涵的演变及其与气至、针感的关系. 山东中医药大学学报. 2015, 39(1):19-21.

[4] 林驰, 马良宵, 苑鸿雯, 等. “得气”“气至”“针感”概念之我见. 中华中医药杂志(原中国医药学报) 2014, 29(9):2892-2895.

[5] 郝歆宇, 鲁凌云, 段多喜, 等. 针刺得气类评测工具研究现状及应用概述. 中华中医药杂志(原中国医药学报). 2018, 33(12):5514-5516.

[6] 武峻艳, 王杰, 张俊龙. 《黄帝内经》中的“得气”与“气至”. 中医杂志 2015, 56(7):544-546.

[7] 潘晓川. 《针灵》. 2014.

[8] 李绵莎. 试述针刺调气和取穴脉法. 新中医. 2019, 51(7):250-252.

[9] 黄龙祥. 中国针灸学术史大纲[M]. 北京: 华夏出版社. 2001: 205, 461, 783.

[10] 杨宗胜, 田风, 应勤丽. 从干针针灸之争再论针灸之“得气”. 中医临床研究. 2019, 11(27):75, 76, 83.

[11] 张建强. 《黄帝内经》针刺调气理论研究. 辽宁中医药大学, 2012.

[12] 袁宜勤. 调气针法初探. 湖南中医学院学报. 1999(3).