



A brief introduction to fu xie

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Abstract: In traditional Chinese medicine (TCM), the doctrine of fu xie is one of the most important basic theories with a long history. This article systematically reviews the available literature about TCM on fu xie from pre-Qin period to now and summarized information about fu xie in terms of its categories and insidious regions, pathogenic features, etiologies and clinical manifestations, and therapeutic methods. Treatment strategies of fu xie may include protecting yin-fluid, unblocking moyuan, opening onto the pleurodiaphragmatic interspace, and adopting the combination of extermination with appeasement. Notably, the combination of extermination with appeasement developed by the author (Tiansong Zhang) involves how to infer the hiding place of a pathogen and how to eliminate the pathogen with appropriate treatment. Modern advances in the doctrine of fu xie reflect the academic thought of TCM, which originates from clinical and discursive thinking and is highly enlightening. The fu xie theory has evolved with the advances in the doctrine of febrile disease and it has high theoretical and practical significance in immune-related diseases, involving infections, autoimmunity, allergic reactions, immunodeficiency, tumors, skin diseases, renal diseases, heart diseases, and spleen/stomach diseases. Further investigations on fu xie and its theory will offer a better understanding of more relevant diseases.

Keywords: Fu xie; traditional Chinese medicine (TCM); etiology and pathogenesis; Chinese medicinal therapy

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The definition of fu xie

Fu means hidden or latent in Chinese. Fu is a specific state, which is used by physicians to assume a medical condition without any obvious symptoms or signs. It has 2 features: first, it means a “concealed” state that cannot be easily detected by the patient and the doctor; second, the pathogenic mechanism has been secretly triggered, and the pathogenic qi is waiting for the opportunity to flourish, which means the patient will become symptomatic under certain conditions.

Xie means “evil” or “pathogen”, the opposite to vital qi. It refers to a variety of pathogenic factors and products such as wind, cold, heat, dampness, dryness, fire, phlegm, stasis,

edema, turbidity, insects, poison, and stagnation. Xie can be either internal or external, and is both visible and invisible.

The term fu xie, also known as fu qi (latent qi or incubating pathogens), has both a broad and a narrow meaning. In the narrow sense, the *Chinese Terms in Traditional Chinese Medicine and Pharmacy* [2004] defines fu xie as “a pathogen that has entered and incubated in the human body but does not cause disease/disorders immediately”, particularly the warm disease caused by fu qi.

In a broader sense, the *Dictionary of Traditional Chinese Medicine* describes fu xie as “incubating pathogens carried in the human body that does not cause illnesses immediately”. These pathogens include 6 climatic exopathogens (wind, cold,

heat, dampness, dryness, and fire) and intrinsic pathogenic factors (phlegm, blood stasis, edema, insects, poison, and stagnation caused by the 7 emotions and dietary problems); however, they may also include tumors, stones, parasites, viruses, bacteria, and fungi, which are typically detected or confirmed by modern examinations/tests.

Fu xie in ancient classics

The concept of fu xie was originated in the *Huangdi Neijing* (*Huangdi's Internal Classic*), and the pathogenic mechanism of fu xie can be found in many treatises in this medical bible of traditional Chinese medicine (TCM). According to the *Lingshu* (*Miraculous Pivot*): *Suilou Lun* (1), “The deficient pathogen may harbor in bones and does not cause illness. At the beginning of spring, the yang qi becomes vigorous, and the subcutaneous tissue becomes open. Meanwhile, the west wind blows during the spring days, and people will be easily affected by the deficient wind. These two pathogens linger in channels and collaterals and jointly cause diseases”. The chapter of the *Lingshu* (1): *Zeifeng* also mentioned that “there are also old pathogens that linger but do not cause illness”, and here the “old pathogens” can also be regarded as fu xie. A similar description can be found in the *Suwen* (*Plain Questions: On malaria*) (2): “For patients with warm malaria, they are affected by the wind-cold in winter, and the cold qi is stored in the bone marrow. Although the yang qi is active in spring, the xie qi (pathogen) still cannot be expelled spontaneously. In the hot summer, the brains shrink, the muscles are thin, and the subcutaneous tissue is open; any physical activities may lead to sweating, during which the pathogen can also be expelled. The pathogen harbors in the kidneys, and the xie qi comes from the inside to the outside. Therefore, yin deficiency leads to yang excess, and the latter causes heat. When the heat peaks, xie qi will return to yin, leading to yang deficiency, which is manifested as cold. Thus, the patients experience heat first and then cold, which is known as warm malaria”. These 2 chapters were the sources of the doctrine of fu xie. The *Suwen: Great Theory on Yin and Yang* argued that “If there is cold invasion in winter, people will contract warm disease in spring; if there is an invasion by wind in spring, people will suffer from diarrhea with undigested food in summer; if there is an attack of summer heat during the summer, malaria will occur in autumn; and if dampness invades in autumn, cough will be caused in winter” (2). Similarly, the *Suwen: Great Theory on Law of Primordial Qi in Nature* proposed that “Attack by wind in spring will lead to acute diarrhea if xie qi lingers in the body; attack by summer-heat in summer will cause malaria in autumn; dampness in autumn

accumulates in lungs and xie qi will ascend reversely to cause cough, leading to flaccid reversal; and cold invasion in winter will incubate and manifests as warm disease in spring” (2). Both chapters believed that the qi of the 4 seasons could linger internally for illness. It has been well recognized that “cold invasion in winter will incubate and manifests as warm disease in spring” is the theoretical source of fu xie. According to the *Suwen: Essentials from the Golden Cabinet*, “The essence is the base of the human body. Storage of essence prevents warm disease in spring” (2). It argues the vital qi plays a decisive role in the development of fu xie. In the *Nanjing* (*Classic of Difficult Issues*) or *The Yellow Emperor's Canon of 81 Difficult Issues*, the author also wrote that “if the three yang channels are affected by wind and cold, which linger and persist, the patients may suffer from the disease known as headache due to meridian qi counterflow”. These elucidations and views can be considered as the roots of the doctrine of fu xie.

The term “fu qi” was firstly proposed by Zhang Zhongjing of the Eastern Han Dynasty, as elucidated in his “*Shanghanlun* (*Treatise on Cold Damage Diseases*)—*Method of Normalizing the Pulse*”, where he wrote “the teacher says: the disease of fu qi should be diagnosed with thoughtful (Yi) caution” (3). Wang Shuhe of the Jin Dynasty wrote, “cold damage refers to infectious diseases that become symptomatic immediately after the invasion of a specific pathogen. Some pathogens may not cause symptoms or signs immediately after exposure; rather, they harbor in the skin or muscles and will cause warm disease in spring and heat disease in summer” (3). This is also known as the doctrine of Incubating Cold Turns into Warm Disease. Wang Shuhe further stated in his *Maijing* (*Pulse Classic*), “wind-cold lingers in the large intestine”, whereas “accumulated heat incubates in the small intestine”. *Zhongzangjing* (*The Treasured Classics*) stated that “The development of tumors, sores, and carbuncles is caused by the accumulated and lingering pathogen(s) in the five zang and six fu viscera, not just due to the static nutrient and defense phases”. In other words, fu xie is the accumulated pathogen(s) in the zang-fu viscera. The concept of fu qi can be regarded as the origin of the doctrine of fu xie.

Cheng Wuji of the Song Dynasty said, “people may be exposed to cold in winter, and the cold incubates in the meridians but does not cause disease immediately. We call it fu qi”, which describes the sites where the fu qi harbors. In his book *Leizhenghuorensbu*, Zhu Gong of the Song Dynasty wrote, “Question 31: Why are some diseases called cold damage in winter, warm disease in spring, and heat disease in summer? Answer: ... diseases that occur immediately after exposure to a pathogen and manifest as headache, body pain, skin heat, and

aversion to cold are called cold damage. In contrast, some diseases do not become symptomatic immediately after being contracted. The cold pathogen is hidden between skin and muscles and causes disease when yang qi arises in spring and summer. In fact, the cold pathogen fights with yang qi between the nutrient and defense phases, and its manifestations are quite similar to those of cold damage. However, the disease is known as a warm disease in spring as the xie qi changes with spring warmth, and known as a heat disease in summer as it changes with summer heat. The naming of 'warmth' and 'heat' is based on the degree of heat. When the yang heat has not yet become prosperous, it will be restrained by the cold, and the disease is called warm disease; when the yang heat has become fully prosperous, it will not be restrained by the cold, and the disease is known as hot disease. Therefore, these diseases are often collectively mentioned in the classics as cold damage". In his book *Shanghanweizhilun*, Han Zhihe of the Song Dynasty wrote, "The cold pathogen becomes highly pathogenic during the period from Lesser Cold to Spring Beginning. It will spread to the zang-fu viscera in the human body. Restrained by the cold pathogen, the fu (hidden) yang is deeply stagnated inside the bone marrow and cannot be smoothly dispersed or cleared at the right time. The cold pathogen may be shallow in some patients; when spring comes, the fu yang can be released early, and the disease is mild accordingly, which is known as a warm disease. In patients who contract a heavy cold pathogen, the vital yang gradually arises after the summer solstice, and the fu yang can no longer linger. In patients who also contract wind-cold or suffer from illness associated with diet and/or bathing, the yang qi stagnated inside the bone marrow will be released only when induced by an exogenous pathogen. The synergistic effect of the released fu yang out of the skin and the hot weather results in a vast diversity of conditions, known as heat disease". This is known as Fu yang hua wen (hidden yang converts into warm disease), which was quite different from the Fu han hua wen (hidden cold converts into warm disease) proposed by Wang Shuhe of the Jin Dynasty. In his book *Liubejianshangbanyijian*, Ma Zongsu of the Jin Dynasty wrote, "the cold pathogen is affected in winter and hidden in the muscles. It causes warm disease in spring, heat disease in summer, dampness disease in autumn, and cold pathogenic disease in winter". In other words, the hidden cold pathogen can lead to different fu qi-associated warm disease throughout the 4 seasons. These elucidations and views reflect the further development of the doctrine of fu xie.

During the Ming and Qing dynasties, research on fu xie was proliferating with the advances in the doctrine of warm disease. In his book *Wenyilun*, Wu Youke of the Ming Dynasty for the first used the term fu xie. He wrote (4),

"When an individual is exposed to xie (evil or pathogen), there can be either xing xie (moving pathogen) or fu xie (hidden pathogen)... A pathogen that hides first and then moves can cause warm epidemics". "Now the pathogen can be half-exterior and half-interior. Although the patients may have sweat at the exterior, it is a vain loss of the vital qi. Since the pathogen is deeply hidden, how can it be removed simply by sweating? We must wait for the fu xie to decrease gradually...". Fu xie is a more appropriate term than fu qi. Fu (hidden) can be interpreted spatio-temporally, while xie (evil or pathogen) is a typical etiological term in TCM. The term "fu xie" can perfectly reflect the cause of disease, location of the disease, struggle between the healthy qi and pathogenic qi, and the developmental trend of the disease. Many TCM doctors and books further elucidated fu xie throughout the Qing Dynasty. The representative monographs included *Wenrefengyuan* (by Liu Baoyi), *Shibinglun* (by Lei Feng), *Fuqijie* (by Ye Lin), *Fuxiexinshu* (by Liu Jiren), and *Fuyinlun* (by Tian Yuncha). For example, in Liu Jiren's *Fuxiexinshu*, the concept of fu xie was expanded to include 6 climatic exopathogens, highlighting that "in patients who contract the six climatic exopathogens and do not get sick immediately, but develop illness later, the pathogens are collectively called fu xie; in patients who have already got sick but were improperly treated, the disease becomes latent and the pathogen is also called fu xie; in patients who have first contracted these factors but were not properly treated, the vital qi is damaged interiorly and the xie qi is also trapped interiorly—the disease may be temporarily 'cured' but will recur afterwards—the pathogen is also called fu xie; in patients whose diseases have become symptomatic and been cured, the root of the disease is not completely removed and the remaining pathogen will hide and recur, which is also known as fu xie". Wang Yanchang further expanded the concept of fu xie in his book *Wangshiyicun*, writing (5), "there are a variety of hidden diseases that can be caused by six climatic exopathogens, various stagnations, diet, static blood, intermingled phlegm, accumulated gas, edema, and insects". In his opinion, fu xie was no longer limited to warm diseases but included all latent pathogens that have not become symptomatic. Based on his clinical experience, Ye Tianshi stated in his book *Linzhenzhinanyi* that "all malaria cases are caused by fu xie rather than immediately after exposure to a pathogen". Wang Mengying emphasized the value of classifying the warm diseases into exogenous warm diseases and fu qi-induced warm diseases. However, Ye Lin opined that fu qi might be triggered by a new pathogen. He disagreed with Wang Mengying's classification for the warm disease, and he explained that "in most cases, both warm disease and

heat disease are the results of fu qi activated by an exogenous pathogen”, although “the fu qi-associated heat disease sometimes is not triggered by an exogenous pathogen”. In his *Fuyinlun*, Tian Yuncha pointed out that “in the spring and summer, people may be exposed to cold and dampness yin xie, which does not immediately cause illness but incubates in the collaterals of the lungs, spleen, and kidneys. Subsequently, they may cause diseases with the internal exuberance of yin qi”. He believed that fu xie may convert to yin after invading the human body, which offers a new explanation of the pathogenesis of fu xie. These elucidations and views marked the independence and maturity of the doctrine of fu xie.

Zhang Xichun, who was active during the period from the Late Qing Dynasty and the Early Republic of China, wrote in his book *Yixuezhongzhongcancanxilu* that (6) “all fu qi are hidden in the adipose membrane of the sanjiao (triple energizer) and interconnected with all the hand and foot meridians. They may germinate in spring when yang is converted into heat and tend to accumulate in the weak zang-fu viscera. As mentioned in the classics, ‘For pathogens to encroach, qi must be deficient’”. This was a brand-new elucidation on the location and pathogenesis of fu xie.

After the founding of the People’s Republic of China, although there were different views on the doctrine of fu xie, most doctors recognized the doctrine of fu xie and have elucidated it from the perspective of modern medicine. For example, Ren Jixue (7) believed that fu xie is associated with many diseases including coronary heart disease, acute glomerulonephritis, infectious neuritis, bronchial asthma, liver cirrhosis, vascular dementia, transient ischemic attack, and primary epilepsy. Zhou Zhongying (8) proposed that many complex and difficult diseases such as epidemic hemorrhagic fever, viral hepatitis, rheumatoid arthritis, systemic lupus erythematosus, Sjögren’s syndrome, and malignant tumors are caused by fu xie and can be treated by using TCM therapies including pathogenic expulsion and strengthening of vital qi.

Which pathogens are involved?

When an exogenous pathogen invades the human body and cannot be driven out by the damaged or deficient vital qi, it will hide inside the body to become a fu xie. For instance, the 6 climatic exopathogens will become incubative wind, incubative cold, incubative heat, incubative dampness, incubative dryness, and incubative fire when each of them hides in the body. Clinically, endogenous wind, endogenous cold, endogenous dampness, endogenous dryness, and

endogenous fire can also become fu wind, fu cold, fu dampness, fu dryness, and fu fire due to the dysfunction of zang-fu viscera. Disorders in the flow of qi, blood, and other fluids will lead to fu phlegm, fu fluid retention, and fu static blood, among others. According to the *Jinguiyaolue* (Synopsis of Prescriptions of the Golden Chamber)—Tan Yin Ke Sou Pian (9), “when phlegm accumulates above the diaphragm, patients will experience shortness of breath, cough, and vomiting; when the disease becomes obvious, patients will suffer from intermingled cold and heat, lower back pain, uncontrollable tears, and trembling body. A diagnosis of incubative fluid retention can be confirmed”.

Where do the pathogens hide?

Many scholars have elucidated the locations where exogenous pathogens hide in the human body. Wang Shuhe believed that the pathogen harbors in the skin, stating “a cold pathogen that does not immediately cause illness hides in the skin” (Shanghanli). Chao Yuanfang of the Sui Dynasty argued that the pathogen hides in muscles and bones. In the *Zhubingyuanboulun* (Treatise on the Pathogenesis and Manifestations of All Diseases) he wrote “a cold pathogen that does not immediately cause illness hides in the muscles and bones”. According to *Shengjizonglu* (Complete Record of Sacred Benevolence), a medical formula book of the Song Dynasty, some diseases, such as lung consumption (or pulmonary tuberculosis), “must have a pathogen hiding in the meridians and circulating among the zang-fu viscera. These pathogens can be latent deeply inside the bone marrow and will persist for a long period of time”. In his book *Wenyilun*, Wu Youke insisted that a pathogen that causes warm disease hides in moyuan (membrane source). Liu Baoyi believed that the pathogens harbor in Shaoyin (kidney meridian). He wrote in his book *Wenrefengyuan* “For patients with warm disease, the cold pathogen hides in the Shaoyin in winter”. Yu Genchu believed that the pathogens harbor in both moyuan and Shaoyin. In his book *Tongsushanghanlun* he wrote, “Fu warm can occur endogenously, and cold pathogen can affect people exogenously. Both of them can be either excessive or deficient. The excess pathogens often arise from Shaoyang (gallbladder meridian) and moyuan, whereas the deficiency pathogen often arise from Shaoyin and xuefen (blood aspect)”. Zhang Xicun believed that the pathogen hides in the fatty membrane of the sanjiao. He wrote in his *Yixuezhongzhongcancanxilu* (6) “the heat converted by fu qi is initially found in the fatty membrane of sanjiao”. Zhou Yangjun opined that “the cold pathogen hides in the bone marrow and Shaoyin meridian, whereas the summer-

heat pathogen hides among the sanjiao, intestines, and stomach". Notably, Zhang Xugu believed that *"pathogens hide in blood and qi"*. In short, after an exogenous pathogen enters the human body, it may hide in skin, muscles, moyuan, fatty membrane, zang-fu viscera, and/or meridians, waiting for the opportune time to cause illness. The locations where the pathogens hide may vary in patients with different syndromes and should be determined after identifying the etiology by differentiating the symptoms and signs. Clinging to clinical presentations alone should be avoided. For example, the famous doctor Ye Tianshi of the Qing dynasty had a variety of discussions on different locations of fu xie. He wrote in different articles (10) *"pathogen hides in Shaoyin"*, *"summer-heat pathogen hides in the upper energizer"*, *"warm pathogen hides in lung-defense phase"*, *"pathogen hiding in Shaoyang will cause malaria"*, and *"fu dampness steams heat and causes diarrhea"*. The locations where the endogenous fu xie hide can be even more complex. For instance, phlegm and static blood can hide in any of the zang-fu viscera and/or meridians. Wu Cheng of the Qing Dynasty wrote in his book *Bujuji* that the fu fluid retention *"hides in moyuan, meridians, and bones/joints"*.

Therefore, the locations where fu xie hide can be quite diverse due to the variations in the strength of the vital qi (which can be strong or weak) and/or various kinds of the exogenous/endogenous pathogens. However, some rules still apply. First, since *"deficiency leads to pathogenic invasion"*, the hiding place of a pathogen can be inferred, because *"the most deficient place is where the pathogen is accommodated"*. For example, if the governor vessel loses its function in *"commanding all the yangs"*, the fu fluid retention can easily locate in the back; in addition, if the middle qi is deficient, pathogens associated with cold-dampness or damp-heat may hide in the spleen and stomach. Second, the pathogens may be located based on their specific pathogenic mechanisms. For instance, the pathogens of warmth and dryness often reside in the lungs and stomach, the pathogens of dampness and heat often hide in moyuan or middle energizer, and the pathogens of phlegm and fluid retention easily take residence in the lungs and stomach. Thirdly, we can infer where the pathogen hides according to the past histories. For example, the pathogen is very much likely to be hiding in the lungs of a patient with a medical history of asthma. Fourth, pathogens may be detected by using modern technology. For example, fatty liver can be detected by ultrasound examination, which infers that the pathogens of dampness and turbidity hide in the liver.

Pathogenic features of fu xie

Hiddenness and latency, waiting time to cause illness

Fu xie is characterized by its hiddenness and latency. The 6 climatic exopathogens must enter and hide in the human body before they can become fu xie. The vital qi may fail to clear the pathogen efficiently when it is deficient; or, the pathogen lurks in places with deficient vital qi and becomes difficult to eliminate. As a result, the pathogen becomes latent, waiting for the opportunity to cause illness. Liu Jiren wrote, *"People may contract one of the six climatic exopathogens but do not become diseased immediately; rather, the illness will occur after a period of time"*. In modern medicine, it is quite similar to the incubation period of some infectious diseases (such as epidemic encephalitis B) and insect poisoning (such as malaria).

Dominated by interior syndromes, with rapid onset and severe symptoms

Unlike the exterior syndromes, which are transmitted from superficialities to interior and from superficial to deep, fu xie causes diseases in a more rapid or intense manner, and interior syndrome(s) occurs once the disease becomes symptomatic. As pointed by Liu Baoyi, *"the warm pathogen turns into heat and goes out to fumigate and steam the 'qifen', manifested as dysphoria with feverish sensation, thirst, and other signs"*, *"when the pathogen invades the liver meridian, the patients may suffer from convulsions, spasms, dizziness, and impaired eye movements. Carphology may be observed in some patients"*. These observations are quite similar to the clinical manifestations of some infectious diseases in modern medicine.

Self-accumulation and progressive aggravation

The 5 endogenous pathogens as well as other pathogens such as phlegm, static blood, edema, and stagnation can experience dynamic changes with the accumulation of xie qi. They can accumulate by themselves and evolve from small to large. Their damage to the body changes from slight to heavy, involving an increasing number of sites. Those affected will become ill when the accumulated pathogen reaches a specific threshold of onset. In modern medicine, it is similar to the development, growth, and metastasis of certain tumors (e.g., lung cancer). Another good example is the bacterial load in the acute exacerbation of chronic obstructive pulmonary disease (COPD) in

modern medicine. There is a certain amount of colonized bacteria in the airways of patients with stable COPD; when the bacterial load increases to a certain level and the local inflammatory response of airways exceeds a certain threshold, acute exacerbation of COPD will occur.

Recurring and persistent attacks that are difficult to heal

The diseases caused by fu xie are often recurrent, persistent, and difficult to heal, which may be due to the deficiency of vital qi, failure to eliminate exogenous pathogens (due to missed diagnosis or improper treatments), and/or retention of pathogens. As described by Liu Jiren, *“in patients whose diseases have become symptomatic and cured, the root of the disease is not completely removed and the remaining pathogen will hide and recur, which is also known as fu xie”*. In modern medicine, it is similar to some viral infections such as chronic hepatitis B virus (HBV) infection. If treated correctly, the virus can be well controlled; however, if there is a deficiency of vital qi or if the virus becomes drug-resistant, the disease will become aggravated. Such control or aggravation may exist alternately.

Etiologies and clinical manifestations of fu xie

Disease onset is closely related to the characteristics of fu xie itself and the strength of vital qi. According to Wang Andao of the Yuan Dynasty, *“people may be exposed to the pathogens of the four seasons, which may cause illness immediately, after a few hours or days, or after a long period of time. In some individuals the pathogens may resolve spontaneously without causing any disease”*, which can be explained by the fact that *“pathogens that cause diseases may accumulate or disperse irregularly, and the vital qi in different people varies”*. The statement *“people exposed to cold in winter will suffer from warm disease in spring, and only those with stored essence will avoid it”* made by Wu Jutong of the Qing Dynasty in his book *Wenbingtiaobian* is the same as the statement *“Storage of essence prevents warm disease in spring”* in the *Huangdineijing*. Clearly, deficiency of vital qi (i.e., immune dysfunction in modern medicine) is the basis for disease onset after contracting fu xie. In addition, the 6 climatic exopathogens, emotions, diets, physical activities, and other environmental and personal factors may be the triggers or aggravating factors of such diseases. In his book *Zhengyinmaizhi*, Zhu Danxi of Jin Dynasty wrote, *“phlegm and fluid retention hide in the body with specific nests and networks. Once the patients have problems in the seven emotions, consume improper diets, and/or are exposed*

to the exogenous wind and cold pathogens in a specific season, asthma will occur”. Chen Nianzu of the Qing Dynasty made a similar assertion: *“The onset of asthma can be explained as follows: the cold pathogen hides in feishu, whereas the phlegm nests are located in the pulmonary membrane. The endogenous pathogens can echo the exogenous ones. These endogenous pathogens can cause asthma in the following conditions: exposure to the six climatic exopathogens including wind, cold, heat, dampness, dryness, and fire; alcoholism and food damage; anger and other emotional problems; and overwork or sexual intemperance”* (11).

Fu xie has diverse clinical manifestations due to its different nature and locations, and the principle of “differentiation of symptoms and signs to identify etiology” is widely recognized in clinical settings. For example, the warm disease caused by fu qi is often serious and featured by the syndrome of exuberance of interior heat, with typical symptoms and signs including fever, thirst, irritability, and red-colored urine. In contrast, cold-fluid retention hiding in the lungs may be associated with cough, white mucus production, and asthma attacks.

Treatment of fu xie

The treatment of fu xie can be carried out in 2 different phases: the attacking phase and the incubation phase (or stable phase). The relationship between deficient vital qi and fu xie should be attentively handled. More specifically, treatments in the attacking phase are mainly “clearing interior heat” and “diffusing the pathogen to the exterior”.

Clearing interior heat

As mentioned above, warm disease caused by fu qi is often featured by the syndrome of exuberance of interior heat, which can be treated with the method of “clearing interior heat with bitter cold”, as described by Ye Tianshi of the Qing Dynasty. Clearing interior heat is a routine treatment. As the mainstay of treatment for warm disease caused by fu xie, it can be applied throughout the disease course. Ye Tianshi wrote in his book *Sanshifuqiwaiganpian* that *“cold pathogen hides deeply and may be converted into heat. The former sages used Radix Scutellariae decoction as the main prescription, whose bitter cold can directly clear the interior heat. Since the heat lurks in the yin, and the bitter taste can consolidate yin, which is a typical orthodox treatment”*. Liu Baoyi also proposed that *“in my humble opinion, the warm disease caused by fu qi may be treated with Radix Scutellariae decoction plus fermented soybean*

and *Radix Scrophulariae*, which is quite effective and feasible”.

Protecting yin-fluid

Persisting warmth and heat pathogens will inevitably hurt the vital yin. Therefore, the attack of a warm disease is typically associated with the immediate injury to yin, which subsequently leads to a variety of signs and symptoms. Thus, preserving more yin-fluid means one more chance for survival. According to Liu Baoyi, “Therefore, when treating the warm disease caused by fu qi, the yin-liquid should be carefully protected during each therapeutic step”. Both “protecting yin-fluid” and “strengthening vital qi to eliminate pathogenic factor” are essential principles.

Diffusing the pathogen to the exterior

As hidden pathogen(s), it is appropriate to drive fu xie out of the body. As argued in *Duyisuibi*, “when we treat a disease, it is always appropriate to ensure the pathogen has a way out. Some pathogens may have a descending nature and therefore can only be expelled by using the purgation method; in contrast, some pathogens tend to move outwards and should be diffused by using dispelling method”. Ye Tianshi wrote in his book *Weikebenye shiyi'an* that “fu xie takes advantage of the deficiency (of vital qi) to hide in the human body and therefore should be treated from inside”. In the *Chong Ding Guang Wen Re Lun*, it was recommended that “for warm and heat diseases, the treatment priority is to diffuse and resolve fu xie”. Long Zhizhang of the Qing Dynasty pointed out in his book *Douziyi* that “Diffusing is the preferred treatment for (warm and heat) diseases. For disease still in the exterior, a method of outthrust through the exterior may be appropriate; for disease already in the interior, dispelling method is more feasible”. Therefore, the concept of diffusing should be carefully considered. Techniques (including relieving superficies, purgation method, diuresis, and drainage of phlegm) that help to drive pathogens out of the body can also be classified as a diffusing method. A pathogen will not be exhausted without diffusing, and it must be removed completely. Sometimes a pathogen hides deeply in the human body and cannot be diffused by specific drugs. Under such conditions, a guiding drug (or medicinal usher) must be used. Wu Jutong analyzed spring warmth with the syndrome of pathogenic retention in the yin phase and concluded that “in patients with night fever abating at dawn and fever receding without sweat, the heat comes from yin”. “The pathogen lurks deeply in xuefen and may also exist in blood and channels, which should not be treated with ‘nourishing

ying’ alone. The condition is also not caused by excess fire, and irrational use of anti-dampness therapy should be avoided”. He recommended the use of qinghao biejia decoction (or the decoction of *Herba Artemisiae Annuae* and *Carapax Trionycis*), in which “the *Herba Artemisiae Annuae* cannot enter yin phase directly but can be ushered in by *Carapax Trionycis*; meanwhile, *Carapax Trionycis* cannot leave yang phase alone but can be ushered out by *Herba Artemisiae Annuae*”. This is actually a genius design.

Open onto the pleurodiaphragmatic interspace

Moyuan was well elucidated in the classic literature. According to the *Suwen—Jutonglun*, “cold qi lurks in the moyuan of small intestine”. Yang Shanshan argued “all the five zang viscera have their own moyuan”. Zhang Zhicong said “moyuan can be written either as 膜原 or 募原 in Chinese. These structures are connected, enabling the circulation of fluids” (12). Shi Funan wrote, “moyuan is anterior to the walls of the chest and abdomen and posterior to the lumbar spine; that is, it is located at the intersections among the upper, middle, and lower jiao and the midway between the superficies and the interior”. Xue Shengbai also wrote, “for moyuan, its external side is attached to muscles and its internal side is connected with stomach-fu; in other words, it is the gateway to the three jiao”. It can be speculated that moyuan is a tangible and visible tissue distributed in the gaps among various tissues, literally equivalent to the peritoneum, pleura, mesentery, fascia, cavity membrane, lymphatic system, and other reticuloendothelial systems in modern medicine. Physiologically, it is related to qi, blood, and fluids. In terms of pathogenic mechanism, pathogens can easily harbor in moyuan and can cause diseases such as malaria, distention and fullness, pleural effusion, ascites, abdominal pain, stomach pain, and damp-heat disease when activated. The basic treatment principle is “Open onto the pleurodiaphragmatic interspace”. Drugs (e.g., *Cortex Magnoliae Officinalis*, *Fructus Tsaoko*, and *Semen Arecae*) for promoting diuresis and eliminating dampness are helpful to unblock moyuan and thus solve the dampness and heat pathogens hiding in moyuan. A representative prescription is *Da Yuan Yin*, which was developed by Wu Youke of the Ming Dynasty.

Adopting the combination of extermination with appeasement

I (the present author, Tiansong Zhang) developed this

method from the phlegm treatment strategy proposed by Jiang Baosu, a famous doctor in the Qing Dynasty, who wrote that “*phlegm is converted from fluids, essence, and blood. Treatment of phlegm must ensure that blood and fluids can safeguard their own townships. If only the phlegm is eliminated, blood and fluids will be converted into phlegm again and again, which only leads to the exhaustion of blood, fluids, and adipose tissues. A bandit in a chaotic world can be a good citizen in a well-ruled society, for whom appeasement is a good idea*” (13). Accordingly, he proposed the strategy of “*ten sessions of reinforcement plus one session of elimination, which represents the combination of extermination with appeasement*”. I introduced this method in the treatment of fu xie in the incubation phase or remission phase, although the targets are different. “Appeasement” also means to strengthen vital qi, not just pacify the pathogen. “Extermination”, of course, is to eliminate the pathogens. By strengthening vital qi, we can diffuse, dispel, and transform pathogenic factors. For patients with the endogenous 5 pathogens and their products (e.g., phlegm and static blood) as well as other conditions such as food stagnation, depression disease, and filths, we can choose the appropriate treatment according to the nature of the pathogens. For example, for patients with COPD, the main treatment is to invigorate the lungs, spleen, and kidneys, which can be supplemented by eliminating phlegm and promoting blood circulation, to gradually remove the latent phlegm and static blood.

In conclusion, the doctrine of fu xie has evolved with the doctrine of febrile disease. Although there are different and even diametrically opposed views among scholars about fu xie, the clinical practice and modern medical sciences have demonstrated that the advances in the doctrine of fu xie reflect the academic thought of TCM, which originates from clinical and discursive thinking and is highly enlightening. Fu xie is closely associated with immune-related diseases, involving infections, autoimmunity, allergic reactions, immunodeficiency, tumors, skin diseases, renal diseases, heart diseases, and spleen/stomach diseases. It has high theoretical and practical significance: First, it offers a better understanding of the characteristics of certain diseases (e.g., asthma) caused by fu xie (e.g., which pathogen? where is it hiding? where does it attack?) and enables early diagnosis and treatment. If a disease can be anticipated and treated before it becomes symptomatic, a variety of therapeutic techniques such as acupuncture and medications can be successfully applied when the vital qi is still strong enough to resist the pathogens. Second, a persisting pathogen will inevitably harm the vital qi.

Therefore, when a pathogen is activated, the vital qi must be carefully protected when fighting against the pathogen. For example, fu qi that causes warm diseases, especially the pathogens causing warm and heat epidemics, are most likely to injure yin. Therefore, the yin of lungs and stomach must be protected during the early stage of treatment, and the yin of liver and kidneys must be protected in the middle and late stages.

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Footnote

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