

The Art of Applying Chinese Herbs

by Haosheng Zhang

Abstract

The successful prescribing of Chinese herbs is dependent on many factors, of which knowledge of the herb's function is just one. Herbs may synergise one another within a formula and therefore the way they are combined can significantly alter their action. At the same time, different doses of a herb may either modify its effect or even render it ineffective if the wrong dose is used. Preparation methods, for example whether fresh or cooked, with or without additional substances, can also dramatically affect the way a herb works within a formula. Finally, how and when a herbal medicine is cooked and taken may make the difference between a successful and unsuccessful treatment.

Keywords: Herb combining, synergy, formulas, dosage, preparation.

Introduction

In Chinese, the term medicine is represented by the character yào, 药, which in a fuller translation has the meaning of a 'grass used to treat a disease'. The character yào is formed from cǎo, 草, and yuè, 乐; cǎo meaning grass, or any similar substance, and yuè meaning music. Therefore, as harmony is a central aspect of music, yào can be understood as substances that bring harmony and restore the balance of yin and yang. All substances that can be used to treat disease are called yào.

The earliest Chinese doctors mostly used single herbs. It was hundreds of years before medical knowledge became refined to the point of developing herbal formulations. During the Qing dynasty, many non-medical classics such as the *Yi Jing* (Book of Changes) and *Kong Zi's Analects* (Confucius's Analects) recorded the use of herbs. However, no one knew how to control the side effects of these medicinal substances and many patients feared poisoning. Indeed, during the Qing dynasty herbs and all medicinal substances were often referred to as dú yào – poison drugs. The most anyone could do was to test whether a herbal prescription was poisonous or not. For instance, if the Emperor was sick, his minister was required to drink the medicinal tea first. If the father fell ill, the child would be the first to taste the decoction.

Shen Nong, who is regarded as one of the founding fathers of Chinese pharmaceutical literature, purportedly self-

tested hundreds of plants in order to further discovery and classification. Legends claim that such was his persistence that he became poisoned seventy times in one day. The labours of Shen Nong and others resulted in a gradual metamorphosis from dú yào, where little was known about herbs, to the *Ben Cao Jing* (Divine Husbandman's Classic of the Materia Medica), a materia medica classic compiled during the Han dynasty that provided a comprehensive understanding of the full range of effects of each herb. This seemingly small shift in perspective was a great revolution for Chinese medicine. With the knowledge of materia medica it was possible to use herbs safely by controlling toxicities and other side effects. Herbs were no longer viewed as poison drugs.

Fang, 方, formula

The character fang has many meanings and interpretations. Primarily, it translates as combining things, originally signifying 'putting two boats together.' It also has several important secondary connotations, namely: rules and law, and direction and stability, and denotes the composition of songs. Therefore, in the context of Chinese medicine, fang must consist of at least two component herbs which must obey certain rules in formulation. Such rules ensure that fang has stability and specific direction, for example, *Ma Huang Tang* (Ephedra Decoction) induces sweating and releases the exterior excess wind cold syndrome.

Complexity and synergy

Chinese medicine emphasises complexity, whereas conventional medicine focuses more on specificity. Concentrating on specificity can lead us to forget the greater whole - the complicated nature of a human being, and the human being within the universe.

Creating a formula from single herbs is more than merely throwing herbs together into the same pot. Chinese formulas reflect a philosophy of dynamism (energy movement) and holism. The difference between single herbs and a well-crafted formula is synergy.

By synergy we mean that the effect of the formula cannot be discerned by merely examining the individual herbs. In other words, one and one do not always add up to two. Sometimes the cumulative effect is greater than two, and sometimes it is less than two.

Classical formulas are precisely composed to maximise this synergistic effect. These formulas are more than a mixture of herbs with similar actions. Each herb within the formula has its own specific properties and functions, which combine with those of the other constituent herbs to form the overall action of the formula. The following examples highlight the many actions possessed by a single herb:

Chai Hu (*Bupleuri Radix*) has three major actions:

1. It harmonises the shaoyang and is used to treat shaoyang syndrome.
 2. It is a major herb to soothe the Liver and regulate qi; mainly used for Liver qi stagnation.
 3. It lifts the yang qi and is used for treating prolapse.
- Gui Zhi (*Cinnamomi Ramulus*) has several actions:
1. It relaxes the muscles and induces sweating to release exterior wind-cold.
 2. It harmonises the ying and wei.
 3. It warms the yang to steam the yin and produce qi.
 4. It warms and unblocks the Heart yang, and calms the Penetrating vessel (*Chong Mai*) to direct the qi downwards.
 5. It warms the channels and stops pain.

Given the myriad functions of each herb, how can we call upon a single specific action? In one instance, we may want to use Chai Hu to harmonise the shaoyang, yet in the next prescription, we might want it to regulate the Liver qi and treat Liver qi stagnation. How is it possible to include one function of a herb and exclude others? This same problem equally applies to Gui Zhi, and all other herbs in the materia medica.

In a formula, we must synchronise the different actions of each herb into one harmonious whole. Remembering that it is the overall direction and effect of the entire formula that is most important, how can we attain this synchrony?

The four basic methods of controlling herbal actions, below, help us to answer these questions:

1. *Pei wu huan jin*: combining herbs to provide a different environment.
2. *Yong liante dian*: the quantity of herb that is used.
3. *Pao zhi fang fa*: how the herbs are processed or prepared.
4. *Jian fu fang fa*: delivery, or how the herbs are cooked and taken (e.g. over a short or long period of time; in decoction, pill or powder form).

The understanding and careful application of these four principles allows us to direct herbs to act together within a formula and achieve synchrony. It is a reflective understanding and considered application of these principles that underpin the art of applying Chinese herbs.

1. *Pei wu huan jin*: Combining herbs to provide a different environment.

A formula contains several herbs, each individual herb working together with the others to yield an overall therapeutic action. Different combinations elicit different actions from each individual herb, and by using different combinations, therefore, we can ensure a herb performs a specific, desired function and not another action of which it is capable.

Pei wu means combining herbs and *huan jin* means the environment, therefore giving the overall meaning of combining herbs to provide different environments. Each herb has many functions, but by changing the environment we can alter its actions; just as a plant may benefit or suffer from being rooted in different soils or exposed to different climate conditions. By using different combinations we are providing a different environment. This can be illustrated by returning to the earlier examples. Let us consider the use of Chai Hu in different combinations to elicit different therapeutic actions:

1. When using Chai Hu to harmonise the shaoyang and treat shaoyang syndrome, it must be combined with Huang Qin (*Scutellariae Radix*).
2. To soothe the Liver and regulate the qi, for treating Liver qi stagnation, Chai Hu is always combined with Bai Shao (*Paeoniae Radix alba*).
3. To lift or raise the yang qi, Chai Hu is always combined with Sheng Ma (*Cimicifugae Rhizoma*).

Furthermore, let us consider the second example, Gui Zhi:

1. In treating excess exterior wind-cold invasion, Gui Zhi and Ma Huang (*Ephedrae Herba*) are combined, drawing on the *xiang xu* (mutual accentuation) relationship to create the strongest effect of inducing sweating and releasing exterior excess wind-cold.
2. Combining Gui Zhi with Bai Shao (*Paeoniae Radix alba*) harmonises ying and wei, regulating the yin and yang.
3. Gui Zhi and Xi Xin (*Asari Herba*) warm the channels and stop pain. However, using either herb separately is not nearly as effective.
4. Combining Gui Zhi with either, or both of, Fu Ling (*Poria*) and Bai Zhu (*Atractylodis macrocephalae Rhizoma*) will warm the yang, steam the yin and generate qi for treating a phlegm or damp disorder.
5. A combination of Gui Zhi with either, or both of, Tao Ren (*Persicae Semen*) and Mu Dan Pi (*Moutan Cortex*) will warm the channels, invigorate the blood and dispel blood stasis.
6. The combination of Gui Zhi and Zhi Gan Cao (*Glycyrrhizae Radix preparata*) uses the pungent and sweet flavours to warm and unblock the Heart yang.

2. *Ji liang te dian*: The characteristic of quantity

Herbal prescriptions are matched to each individual's unique presentation, where variables such as gender, condition and constitution are taken into account. Similarly, the quantity of each herb prescribed varies with the individual qualities of that herb, namely its flavour, nature, possible toxicity, heaviness (some Chinese herbs are minerals) and the particular part of the herb being used (e.g. flower, leaf, or root).

Ancient Chinese medical practitioners regarded their formulas as great secrets; the essence of this secret being the quantity of each herb. A doctor might reveal the ingredients of a formula, but withhold the exact amount of each herb used. Prescribing those same herbs without this information would not produce the desired therapeutic action of the formula.

The secret then, is in the numbers. Quantity is the most important factor affecting the direction of individual herbs within a formula. Today many textbooks give a standard range, such as "three to nine grams" or "six to fifteen grams", but this misses the critical importance of using precise amounts for specific purposes. A well known anecdote reinforces this point¹: A patient was suffering from severe palpitations with *jie* (knotted) and *dai* (intermittent) pulses. His Western diagnosis was coronary heart disease. He was treated with *Zhi Gan Cao Tang* (Honey-Fried Licorice Decoction), but this formula had no effect. The patient sought the assistance of Yue Mei Zhong, a famous professor of Chinese medicine. Professor Yue also used *Zhi Gan Cao Tang*, but this time the results were miraculous. How could this be? It was because while the previous doctors had made up their own amounts of each herb within the formula, Professor Yue precisely followed the quantities as given in the *Shang Han Lun* (*Treatise on Cold Damage*).

Recent scientific research has also reinforced the importance of following the herbal quantities specified in the classics, as illustrated in the following examples:

1. *Wu Ling San* (Five-Ingredient Powder with Poria).

Modern investigations of this formula have shown that the best diuretic effects are obtained with quantities of each herb as specified in the *Shang Han Lun*. Altering any of these amounts caused a decreased effectiveness.

2. *Shao Yao Gan Cao Tang* (Peony and Licorice Decoction).

This formula is commonly used to moderate tension and stop pain. The original quantities of both Bai Shao Yao and Zhi Gan Cao are fairly large at four liang (about 120g). In these quantities, the formula is capable of easing intestinal colic of an intensity that usually requires pharmaceutical

intervention. It has been found, however, that reducing the amount of Bai Shao or reducing the amount of both herbs together will actually activate the gastrointestinal musculature. In other words, the improper quantities will have the opposite effect of the original formula.

There are several specific examples of how an individual herb's function may be altered by varying the amount of herb used. Let us consider the following examples:

Chai Hu (*Bupleuri Radix*)

1. To harmonise the shaoyang and treat shaoyang syndrome, the amount is always rather large: 12 to 15 grams.
2. To soothe the Liver and regulate Liver qi, in order to treat Liver qi stagnation, the amount is medium: 6 to 9 grams.
3. For lifting or raising the yang qi to treat prolapse, a small amount is used: less than 3 grams.

Using 12-15 grams to treat prolapse will not do the job. Similarly, using 3-6 grams for shaoyang syndrome will also not have the desired effect.

Zi Su Ye (*Perillae Folium*)

1. Used in a large quantity (15g), it induces sweating and releases the exterior, and is used to treat wind-cold invasion.
2. A medium amount (6-9g) regulates Spleen and Lung qi.
3. A small amount (3-6g) soothes the Liver and reduces Liver qi stagnation.

Jin Yin Hua (*Lonicerae Flos*) - *Lian Qiao* (*Forsythiae Fructus*)

1. A very large dose (30g or more) clears heat and relieves toxicity. For this effect one may use as much Jin Yin Hua or Lian Qiao as desired – a greater dose has a greater ability in this regard.
2. Use a medium amount (e.g. 9-12g) to release exterior wind-heat.

Bo He (*Menthae haplocalycis Herba*)

1. To soothe the Liver and regulate Liver qi, to treat Liver qi stagnation, use a small amount: less than 3 grams.
2. To release exterior wind-heat use a larger quantity (6-12g).

Huang Lian (*Coptidis Rhizoma*)

1. Formulas from the *Shang Han Lun* such as *Huang Lian Jie Du Tang* (Coptis Decoction to Relieve Toxicity), *Ge Gen Qin Lian Tang* (Kudzu, Coptis and Scutellaria Decoction), and *Bai Tou Weng Tang* (Pulsatilla Decoction) all use large doses, of the order of three qian, to clear heat and purge fire.
2. However formulas such as *Ban Xia Xie Xin Tang* (Pinellia Decoction to Drain the Epigastrium), *Sheng Jiang Xie Xin Tang* (Fresh Ginger Decoction to Drain the Epigastrium), *Gan Cao Xie Xin Tang* (Licorice Decoction to Drain the Epigastrium),

and *Fu Zi Xie Xin Tang* (Prepared Aconite Decoction to Drain the Epigastrium) make use of this herb's bitter flavour to descend and dry dampness and strengthen the Stomach, and only require one qian.

Bing Lang (*Arecae Semen*)

1. An amount of 6-15g will move qi and reduce stagnation.
2. A larger dose of 60-120g will expel tapeworms.

Hong Hua (*Carthami Flos*)

1. A large dose dispels blood stasis.
2. A smaller dose will harmonise the blood.

In many formulas it is the relative quantities of herbs that are important. For example:

Bu Yang Huan Wu Tang (Tonify the Yang to Restore Five-tenths Decoction). This formula is from the blood stasis school. The *jun*, or emperor, herb is Huang Qi (*Astragali Radix*), and it is used in a large quantity of four liang. This amount is more than ten times the total of all the other herbs in the formula.

Liu Yi San (Six-to-One Powder). This formula uses a six-to-one ratio of Hua Shi (Talcum) to Gan Cao (*Glycyrrhizae Radix*). This is significant because one is the water number of Heaven, while six is the water number of Earth. Not coincidentally, this formula promotes urination to clear damp heat and summer heat.

It is clearly evident from all of the above examples that using different quantities of the same herb can change the whole direction of a formula.

3. Pao zhi fang fa: The methods of preparation and processing

Different methods of preparation and processing can also control the direction of a herb's action within a formula. The use of the correct herb combinations in the right quantities will not achieve an optimal result if the preparation, or *pao zhi*, of each herb has not been taken into account:

Bai Zhu (*Atractylodis macrocephalae Rhizoma*)

Its major functions are to tonify the Spleen, tonify qi, dry damp, drain water and help digestion. The form of preparation alters the direction of this herb's action:

1. Sheng Bai Zhu is simply dried with no processing. This form dries dampness, and it is used to treat water problems including damp and phlegm. Examples of such usage are *Ling Gui Zhu Gan Tang* (*Poria*, Cinnamon Twig, *Atractylodes Macrocephala* and Licorice Decoction) and *Wu Ling San* (Five Ingredient Powder with *Poria*).

2. Chao Bai Zhu has been cooked, ideally with yellow soil and in this form is better for strengthening and tonifying the Spleen. The formula *Si Jun Zi Tang* (Four-Gentleman Decoction) should use this form of the herb.

3. Jiao Bai Zhu is cooked until the surface is burnt and brown. This form is better for reducing food stagnation and is used in formulas such as *Jian Pi Wan* (Strengthen the Spleen Pill).

Huang Qi (*Astragali Radix*)

1. Sheng Huang Qi is simply dried and has not been prepared. When used in a large dose this form strongly tonifies the qi; acting quickly to consolidate the qi and keep it within the body. It is used for prolapse, bleeding, uncontrolled sweating and even paralysis. Examples of its use are found in the formulas *Yu Ping Feng San* (Jade Windscreen Powder) and *Bu Yang Huan Wu Tang* (Tonify the Yang to Restore Five-Tenths Decoction).

2. Zhi Huang Qi is cooked with honey. This form of the herb gradually tonifies the qi over a long period of time. It is used in formulas such as *Gui Pi Tang* (Restore the Spleen Decoction) and *Shi Quan Da Bu Tang* (All-Inclusive Great Tonifying Decoction).

From this example we can see that Zhi Huang Qi has a long-lasting effect but takes a long time to work, whereas Sheng Huang Qi has a more rapid effect and may be used for urgent care.

He Shou Wu (*Polygoni multiflori Radix*)

1. Sheng He Shou Wu is simply dried. This herb can clear heat, moisten the intestine and unblock the bowels and is used for constipation due to dryness in the intestines. It is also capable of relieving toxicity and checking the advance of malaria or treating chronic malarial disorders. Additionally, it is used to treat sores, carbuncles, swellings and scrofula.

2. Zhi Shou Wu is specially processed with black beans. This form of the herb can tonify the blood and nourish the essence. It is used for treating blood and essence deficiency syndrome, to replenish the yin essence and to promote longevity. Zhi Shou Wu is famous for treating prematurely grey hair and hair loss.

Gan Cao (*Glycyrrhizae Radix*)

1. Sheng Gan Cao is simply dried. This herb can clear heat and relieve toxicity. It is used to treat sores, carbuncles and sore throats and it can even relieve poisoning from pesticides or herbs.

2. Zhi Gan Cao is cooked with honey. This herb tonifies the Spleen and the qi, moderates tension and stops pain. Zhi Gan Cao should be used in almost every instance where tonification of the middle burner – of the Spleen and the qi – is needed.

4. *Jian fu fang fa*: Delivery: methods of cooking and taking herbs

The order and length of time herbs are cooked is also of great importance. For example, some herbs should be cooked first, whilst others should be added at almost the last minute. The following examples illustrate the importance of this principle:

1. *Ci Shi* (Magnetitum), *Zhen Zhu Mu* (Margaritiferae Concha usta) and *Mu Li* (Ostreae Concha) should all be decocted first so that they can be cooked for a longer period due to the fact that these herbs are very heavy, and more time is needed to bring them into action.

2. On the other hand, herbs such as *Bo He* (Menthae haplocalycis Herba), *Sha Ren* (Amomi Fructus), and *Chen Xiang* (Aquilariae Lignum resinatum) should only be cooked for a short time or even added at the end of decocting, as these herbs are very fragrant and their oils are easily dissipated with too much exposure to heat. Finally, it is important to melt down herbs such as *E Jiao* (Asini Corii Colla), *Gui Ban Jiao* (Testudinis Plastris Colla) and *Lu Jiao Jiao* (Colla Cornu Cervi).

3. *Yin Qiao San* (Honeysuckle and Forsythia Decoction). This is a famous formula used to treat external wind-heat invasion. In the original book *Wen Bing Tiao Bian* (Treatise on the Differentiation and Treatment of Seasonal Warm Diseases) the author mentions that the herbs should only be cooked for a short time, until the fragrance of the formula can just be discerned. The effectiveness of *Yin Qiao San* is in its pungency. Cooking it for too long destroys this pungent flavour and the formula will no longer be able to release the exterior. A long cooking time causes the *wei* (flavour) to thicken and destroys its *qi* (pungency), causing it to be directed to the middle burner. After such a long cooking time the formula may be used to clear heat and relieve toxicity, but it will no longer have a good effect on releasing the exterior. Actually most herbs that release the exterior have a pungent flavour and should be cooked for a short time, for example *Bo He* (Menthae haplocalycis Herba), *Jing Jie* (Schizonepetae Herba), etc.

Herbs may be given in decoction, powder or pill form and a patient may be instructed to take a formula before or after a meal, or even on an empty stomach. Herbs may also need to be taken warm, cold or at room temperature. Whilst taking a formula, a patient may need to avoid certain foods, or they may have to eat porridge after drinking a decoction; the doctor may even advise having a nap after taking a dose of the formula. All of these factors can affect the formula's result. For example:

1. *Gui Zhi Tang* (Cinnamon Twig Decoction). The *Shang Han Lun* states that after taking this formula, the patient should drink some rice porridge, cover up warmly and take a nap

in order to create a mild sweat and release the exterior. Rice porridge also generates fluid to assist sweating and covering up prevents pathogens from entering the body.

2. *Jiu Wei Qiang Huo Tang* (Nine-Herb Decoction with Notopterygium). This decoction was originally created to treat exterior wind-cold-damp invasion with interior heat; the main symptoms being headache and body-ache. For severe cases the doctor should elicit the strongest possible effect of inducing sweating to release the exterior. In this case, the formula should be taken hot with some rice porridge. For mild cases, one can omit the rice porridge and administer the formula warm to avoid inducing excess sweating. Later, this formula was used in a pill form: *Jiu Wei Qiang Huo Wan*. This pill is used to treat *bi* syndrome, when wind-cold-damp obstructs the channels and causes joint pains. In this case, the formula is used for the interior rather than the exterior.

3. *Fu Yuan Huo Xue Tang* (Revive Health by Invigorating the Blood Decoction). This formula is used for traumatic injuries and associated pain, and was originally designed to treat people who had fallen from a great height, causing blood stasis in the hypochondriac region with severe pain. The creator of this formula specifically instructed that water and liquor (alcohol) must be used together when cooking the herbs, and that the herbs should be taken warm before a meal. After a bout of diarrhoea the pain would be greatly reduced and one could then stop using the formula.

In my studies I observed one of my mentors, Professor Deng Zhongjia, using this formula. At first he did not use any alcohol in preparing the herbs. There was absolutely no pain relief, even though the patient took all the bags prescribed. Subsequently, he made another batch, this time using alcohol as directed. The correctly prepared formula had miraculous results and provided the patient with much-needed relief.

Using the same formula with the same herbs but changing the temperature or form of administration also has a great impact on its therapeutic action.

The dosage of a formula varies with the individual patient's age, gender and constitution. Adults and those with a strong constitution are prescribed a larger dose, while weaker patients such as the elderly or children should receive a smaller dose.

Certain dietary and lifestyle precautions may be given to the patient with a particular formula. For instance, with *Gui Zhi Tang* the patient should avoid raw or cold foods, greasy food such as meat or cheese, alcohol and strong or bad smelling food such as seafood. When taking formulas

with herbs such as Wei Ling Xian (*Clematidis Radix*) or Tu Fu Ling (*Smilacis glabrae Rhizoma*), the patient should avoid drinking tea.

If a problem is of an excessive nature such as blood stasis or water accumulation, or if it is located in the lower part of the body, then it is more beneficial for the patient to take the herbs less frequently but in a larger quantity. On the other hand, if the problem is located in the upper part of the body then they should take smaller, but more frequent doses.

Conclusion

Each of the principles for controlling herbal actions within a formula has the potential to greatly change the overall therapeutic effect of a formula, and thus determine the ultimate success of a prescribed treatment. The successful application of these principles requires considered reflection and often a subtle hand, tempering one's knowledge with experience. This is the art of applying Chinese herbs.

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Notes

1 Peng, Wannian, The Characteristic and Scientifics of Zhang Zhongjing's Prescribing Formulas and Using Herbs, *Guo Yi Lun Tan/ Chinese Medical Forum*, Page 1-4, Number 11, August 1988.