

Herbal Monograph for *Xiao Chai Hu Tang*: Part Four

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Editor's Note: This is the final article in a four-part series on *xiao chai hu tang*. [Part three](#) appeared in the September 2007 issue. [Part one](#), with a complete list of references, is available online in the July 2007 issue.

Toxicology

- *Xiao chai hu tang* has a very low toxicology profile. In one study, rats were given up to 640 mg/kg of the extract per day continuously for 6 months. At the end of the study, the animals were examined for body weight, general behavior, water and food intake, and function of vital organs. The study concluded that no abnormality could be observed.⁸²
- Interstitial pneumonia: More than 200 patients with interstitial pneumonia have been associated with the use of *xiao chai hu tang* in Japan. While the exact mechanism of this adverse reaction is not completely understood, it was suggested that phenolic compounds (lignans and flavonoids) present in this formula may induce apoptosis in human lung fibroblasts and peripheral blood mononuclear cells. Two phenolic compounds, baicalein and medicarpin, were found to significantly inhibit the growth and reduce the viability of lung fibroblasts. The researchers suggested that the phenolic compounds of *xiao chai hu tang* (especially baicalein and medicarpin) may have a direct effect on human lung fibroblasts and immune cells to induce apoptosis.⁸³

Note: *Xiao chai hu tang* is one of the most commonly used herbal formulas in Japan. According to a study published in 1999, this formula has been administered to 1.5 million Japanese patients with chronic liver diseases.⁸⁴ In addition, there have been numerous other reports that document the safe and effective use of this formula. Thus, it is important to keep a proper perspective on the relative frequency of events, as well as risk-to-benefit analysis, in evaluating toxicology reports.

Xiao chai hu tang is traditionally used to treat alternating chills and fever, but also can be used for patients showing temperature differences in the body, such as cold limbs but a warm body, or warm limbs and a cold body. Another condition that also can be treated with this formula is drastic temperature differences on the dorsal and palmar aspects of the hands, with the palmar aspect being cold and the dorsal aspect being warm.

Xiao chai hu tang can be used for unremitting fever in children approximately one week after contracting an exterior condition. These patients exhibit fever that is not alleviated with antipyretic or antibiotic drugs. Though these drugs work well to temporarily bring down body temperature, the fever tends to return as soon as the therapeutic effect is over.

One unique application of *xiao chai hu tang* that requires additional explanation is the treatment of an exterior condition in women with blood deficiency. Loss of blood during menstruation and childbirth creates emptiness in the uterus and the *chong* (thoroughfare) channel. Due to this void, pathogenic factors directly and easily invade into deeper levels of the body instead of lingering at the *wei* (defensive) level. The liver stores blood, travels around the genital region, and traverses up the lower abdomen and is closely related to the uterus and *chong* channel. If heat enters the uterus and *chong* channel, it affects the liver, which in turn affects its paired organ, the gallbladder. This stagnant heat creates disharmony in the *shaoyang* stage, leading to alternating chills and fever, hypochondriac fullness/discomfort, a bitter taste in the mouth, a dry throat, irritability, lack of appetite, nausea and vomiting. *Xiao chai hu tang* harmonizes the *shaoyang* and pushes the heat outward to relieve the heat trapped in the uterus and *chong* channel.⁸⁵

Alternating chills and fever is a key symptom that can be treated with *xiao chai hu tang* or *xiao yao san* (Rambling Powder). However, the diagnostic criteria and clinical application guidelines are very different.

Xiao chai hu tang treats alternating chills and fever caused by exterior pathogenic factors that enter the *shaoyang* level and get trapped in the half-exterior and half-interior location. *Ren shen* (Radix et rhizoma ginseng), *da zao* (Fructus jujubae) and *gan cao* (Radix et rhizoma glycyrrhizae) strengthen the interior to push the pathogens outward and prevent them from invading further into the body, not to tonify the deficiencies. *Sheng jiang* (Rhizoma zingiberis recens) is used with *ban xia* (Rhizoma pinelliae) to treat nausea and irritability caused by gallbladder heat invading the stomach.

Xiao yao san treats alternating fever and chills caused by disharmony among the liver, spleen and gallbladder and accompanied by blood deficiency and liver *qi* stagnation; the chills and fever are not the result of an exterior invasion. *Dang gui* (Radix angelicae sinensis), *bai shao* (Radix paeoniae alba), *fu ling* (Poria), and *bai zhu* (Rhizoma atractylodis macrocephalae) strengthen the spleen to prevent the liver from overacting. *Sheng jiang* (Rhizoma zingiberis recens) warms the middle jiao to strengthen the spleen.

Fever and chills (aversion to cold) are a common complaint in exterior conditions, but they must be differentiated correctly.

- In *taiyang* syndrome, fever and chills are present simultaneously.
- In *yangming* syndrome, there is high fever and absence of chills.
- In *shaoyang* syndrome, there are alternating spells of fever and chills.

Xiao chai hu tang and *xiao yao san* (Rambling Powder) both use *chai hu* (Radix bupleuri) as the chief herb, but with different intent and at different dosages.

Xiao chai hu tang treats *shaoyang* syndrome in which the pathogenic heat is trapped between the exterior and interior. In this case, signs of alternating chills and fever are more severe. As a result, a large dose of *chai hu* (Radix bupleuri) is needed to harmonize *shaoyang* and clear the heat.

Xiao yao san (Rambling Powder) treats liver *qi* stagnation accompanied by spleen deficiency, manifesting in emotional complaints and involving less severe physical symptoms, compared to that of *xiao chai hu tang*. Although *chai hu* (Radix bupleuri) also is the chief herb, only a moderate dose is needed to regulate liver *qi*. This herb serves more as a channel-guiding herb in this formula to address liver *qi* stagnation. Using a large dose of *chai hu* (Radix bupleuri) in *xiao yao san* is not appropriate

because it shifts the effect of the formula from harmonizing to exterior-releasing. Moreover, patients with liver *qi* stagnation often have underlying deficiencies and using *chai hu* (Radix bupleuri) at a large dose may exacerbate such deficiencies.

Xiao chai hu tang and *da chai hu tang* (Major Bupleurum Decoction) both treat *shaoyang* disorders with alternating chills and fever, a bitter taste in the mouth, and chest and hypochondriac distention. Both formulas contain *chai hu* (Radix bupleuri), *huang qin* (Radix scutellariae), *ban xia* (Rhizoma pinelliae), *sheng jiang* (Rhizoma zingiberis recens), and *da zao* (Fructus jujubae). Despite the similarities, they have contrasting differences:

Xiao chai hu tang contains *chai hu* (Radix bupleuri) and *huang qin* (Radix scutellariae) as chief herbs to harmonize the *shaoyang*. *Ren shen* (Radix et rhizoma ginseng) strengthens the interior to prevent the pathogenic factors from moving further inward. This formula treats a variety of conditions, including exterior invasion in women during their menstruation, jaundice and symptoms of malaria.

Da chai hu tang is mainly used for *yangming fu* (hollow organs) syndrome with excess heat in the body. *Da huang* (Radix et rhizoma rhei), *zhi shi* (Fructus aurantii immaturus) and *bai shao* (Radix paeoniae alba) sedate heat in the *yangming* channel. The key sign for differential diagnosis is constipation with abdominal pain.⁸⁶

Xiao chai hu tang and *hao qin qing dan tang* (Artemisia annua and Scutellaria Decoction to clear the gallbladder) both harmonize *shaoyang* and treat chief manifestations of alternating chills and fever, as well as chest and hypochondriac distention and pain. Their main differences are as follows:

- *Xiao chai hu tang* lifts clear *yang qi* and pushes pathogenic factors outward. Containing *huang qin* (Radix scutellariae), *ren shen* (Radix et rhizoma ginseng), *da zao* (Fructus jujubae), *gan cao* (Radix et rhizoma glycyrrhizae), *ban xia* (Rhizoma pinelliae) and *sheng jiang* (Rhizoma zingiberis recens), this formula harmonizes *shaoyang*, dispels pathogenic factors and restores *zheng* (upright) *qi* to treat alternating chills and fever, hypochondriac pain and distention, a bitter taste in the mouth, a dry throat, a thin, white tongue coating and a wiry pulse.
- *Hao qin qing dan tang* clears damp heat in the stomach and gallbladder using *qing hao* (Herba artemisiae annuae) and *huang qin* (Radix scutellariae) as the two main ingredients. The formula further contains *zhu ru* (Caulis bambusae in taenia), *ban xia* (Rhizoma pinelliae), *chi fu ling* (Poria rubra), *bi yu san* (Jasper Powder), *chen pi* (Pericarpium citri reticulatae), and *zhi qiao* (Fructus aurantii), to treat damp heat with turbid phlegm accumulation in the *shaoyang* channel. Symptoms include alternating chills and fever, with a greater degree of heat than cold, a bitter taste in the mouth, acid regurgitation, a thick, greasy tongue coating, and a slippery, rapid pulse on the right hand and a wiry, rapid pulse on the left hand.⁸⁷

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