

# Gan Mai Da Zao Tang

## Understanding Ancient Chinese Formulas in a Modern Western Setting

*Gan Mai Da Zao Tang* (Licorice and Jujube Combination) is a formula of the *Jin Gui Yao Lue*. There is only a very short passage describing circumstances for its use: it is for the treatment of the syndrome known as *zangzao*. This syndrome involves agitation (*zao*) arising from the visceral organs (*zang*). The general term for organs is *zangfu*: the yin organs are *zang*, and the yang organs are *fu*; apart from the six primary organ pairs, other organs are usually included in the term *zangfu*, shortened to *zang* when used in compound descriptions like *zangzao*. In particular, the type of agitation expressed by *zao* can be interpreted by three descriptions: impatience; a too quick response to circumstances; and rash or unimpeded behavior. As to the viscera being referred to, most likely the original meaning is a disorder of the uterus (*zizang*); the formula is in a section on gynecological disorders. Thus, one translation of this passage (chapter 22, section 6) is:

A woman with visceral irritation (hysteria) tends to grieve and cry as though possessed by a spirit. She also yawns frequently. She needs *Gan Mai Da Zao Tang*.

Yawning, which stretches the jaw, may be accompanied by other spontaneous stretching; in texts describing *zangzao*, “yawning and stretching,” are usually both indicated, including in fuller translations of this same passage. The parenthetical term hysteria was added by the translator to indicate origin in the uterus (Greek: *hysteria*) with symptoms of exaggerated or uncontrollable emotion. Although modern medicine doesn't link the uterus with emotional expression, it does recognize that ovarian hormones influence mood, and, in particular, current texts include moodiness and emotional lability in descriptions of a premenstrual syndrome and perimenopausal and menopausal conditions, understood to be related to shifting hormone patterns. The ancient Chinese could not distinguish between uterus and ovaries as the source.

The treatment of this *zangzao* syndrome with *Gan Mai Da Zao Tang* is often explained today by relying on the Materia Medica classification of the three herb ingredients, which serve as spleen qi tonics (*mai*, wheat, is classed with the astringents; as a grain, it also serves as a spleen tonic), but the original understanding was different. In particular, the sweet taste was understood to calm irritation and agitation and for this acute condition, an especially strong sweetness was utilized. *Dazao*, whether using the large black dates known by that name or the smaller red dates, known as *hongzao*, are very sweet, being comprised mainly of sugar. *Gancao* is intensely sweet, especially at the large dose indicated for this formula. *Mai* (the ordinary wheat grain) is usually *fluxiaomai* in modern preparations (the portion of grain that floats due to low density and oily coating, it is mainly wheat husk), but the original ingredient was most likely just the ordinary wheat grains. Wheat has a mild sweet taste. Altogether the formula has a single dominant taste of sweetness.

In China at the time of the original *Jin Gui*, and even centuries later, during the Song Dynasty, when the text was edited considerably, the use of sugar (or honey) was limited, and in some regions of China, wheat was not a common part of the diet. So, this formula introduced to the patient some ingredients that might not have been routinely ingested as they are today. Under those earlier circumstances, the nutritional values of wheat (mainly starch, some protein, some B-vitamins) and of jujube (the Chinese date), mainly sugar, could have a type of “medicinal” effect. *Gancao* has a significant medicinal action but it is not usually considered sedative, at least apart from the concept of sweetness counteracting irritation.

The measurement system for herb ingredient dosage is somewhat difficult to translate from the *Jin Gui* into modern weights, but this is an estimation of how the formula can be reconstructed:

*Gancao*: 9 grams

*Mai*: 15-30 grams

*Dazao*: 10 pieces

In terms of the basic mass of materials, wheat dominates. In the *Jin Gui*, this formulation has about the highest dose of *gancao*; most of the other formulas having one third or two thirds that amount in decoction. *Dazao* quantities usually range from 6 pieces to a maximum of about 15 pieces, so the amount in the formula is an intermediate dose. *Gancao* dose was given in a weight measure, *mai* in a “scoop” (*sheng*) measure, and *dazao* by how many fruits (remove the pit and shred the partially dried fruit), which is one reason it is difficult to translate to grams as in modern prescriptions.

The combination of *gancao* and *dazao* is found throughout the *Shang Han Lun* and *Jin Gui Yao Lue*, especially appearing in the numerous variants of *Gui Zhi Tang* (Cinnamon Combination). These two herbs are central to the formula *Sheng Jiang Da Cao Tang* (chapter 7 of *Jin Gui*), which additionally has *shengjiang* and *renshen*; another example is *Fu Ling Gui Zhi Gan Cao Da Zao Tang*, with *gancao* and *dazao* plus *guizhi* and *fuling* (chapter 8). The two herbs are combined with *shengjiang* and *jiegang* to yield *Bai Nong Tang* (chapter 18). The unique feature of *Gan Mai Da Zao Tang* is the use of wheat, an ingredient not mentioned in *Shang Han Lun* and only rarely found in *Jin Gui*, such as in *Hou Po Ma Huang Tang*, where it serves as an astringent to counterbalance the strong diaphoretic action of *mahuang*.

Today, wheat is not only ubiquitous in the world diet, it is also concerning to many who are managing wheat sensitivity or the specific disorder Celiac disease. Since wheat is widely used already, what advantage can it have in patients taking this formula? In fact, it probably contributes little to nothing today, but in the original setting, wheat provided a nutrient group that is sometimes low in the ancient Chinese diet: B vitamins, which affect the nervous system. In the book **Thousand Formulas and Thousand Herbs of Traditional Chinese Medicine**, *Gan Mai Da Zao Tang* is placed in the section on sedative formulas. None of the other formulas in that section contain wheat (*mai* or *fu Xiaomai*). This finding, which is likewise the case for numerous formulation texts, indicates that the ingredient is not especially relied upon for this sedative purpose. *Dazao* contains some calming glycosides, which are still relied upon, but its dominant ingredient, as noted above, is simply sugar. With plenty of sugar in the modern diet, there is no need for that component.

In sum, this formula is largely obsolete. In place of *dazao*, which is the fruit of *Zizyphus jujuba*, many formulations with calming effect contain *suanzaoren*, the seed of the related plant *Zizyphus spinosa*. *Gancao* remains a common ingredient in formulas, though normally in relatively lower dosage than in *Gan Mai Da Zao Tang*. The apparent replacement for wheat in later formulas is *fuling* and/or *fushen*, the starchy tree mushroom (hoelen, poria) that grows on pine tree roots, but not a strong source of B vitamins. A formula mentioned above from the *Jin Gui* with *dazao*, *gancao*, *fuling*, and *guizhi* is indicated for a sudden manifestation of *bentun*, commonly translated as “running piglets.” The implication of this term is a rapid and unexpected movement, described as qi rushing from the lower abdomen (the uterine area) to the chest (heart) or to the throat, a condition said to be caused by fright. The upward rush of qi is temporary and recedes after some time (a few minutes to a couple of hours). The syndromes of *zaozang* and *bentun* may have similar expression and rely on sweet formulas for treatment in this ancient system of herbal medicine.

The continued reference to and popularity of *Gan Mai Da Zao Tang* may be attributed primarily to the indications that are given for it, calming effects, which fit well for many people having anxiety and reactivity as a persistent problem. Favorable response may come about from the action of the formula, but also from the calming effect of having a diagnosis (spleen qi deficiency with spirit agitation) and a therapeutic method (e.g., tonifying the spleen), as may be explained by Chinese medicine providers. Other formulas that were developed later, such as *Gui Pi Tang* (Restoring the Spleen Decoction; Ginseng and Longan Combination), probably better suit that particular description and other formulas even from the *Jin Gui* period, such as *Suan Zao Ren Tang* (*Zizyphus* Combination) likely have ingredients more suited to the circumstances we have today in which wheat and sugar are commonplace.