

# Analysis of the Characteristics of Zheng's Laryngology in Treating Constipation

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**Abstract:** Constipation is a common clinical disease and often occurs as a concomitant symptom of other diseases. It often happens to children, the elderly and the frail. Doctors have always used Dachengqi Decoction and its addition or subtraction to treat hot constipation; The method of warming yang is used to treat cold constipation. At the same time, rhubarb and other laxative drugs are needed to assist. The medicinal properties of rhubarb are bitter cold, severe, and easy to damage yin and consume qi. It is not suitable for children and the elderly and infirm. Zheng's laryngology advocates the treatment of hot constipation with cool and moist, and the treatment of cold constipation with warm and moist, which reflects the academic thought of Zheng's laryngology to protect vitality and yin. The warm and moist method for treating constipation has distinctive characteristics and definite curative effect, which is worthy of clinical promotion and application. What's more, it is especially suitable for children and the elderly and infirm.

**Keywords:** Zheng's laryngology; Constipation; Hot constipation; Cold constipation; Cooling and moistening method; Warm and moist method

## 1. Introduction

Constipation, as one of the intestinal diseases, mainly refers to the following three circumstances: 1) prolonged defecation cycle; 2) the defecation cycle is not long but the feces are dry and difficult to; 3) the fecal quality is not hard, and although it has the intention of defecation, it is not that smooth. The incidence rate of constipation is 9.5% [1]. The prevalence of children, the elderly and the infirm increased significantly. The prevalence rate of children is between 0.5% and 32.2% [1], that of women in pregnancy is 13% [2], that of people over 65 years old is 17.6% [3], that of patients with diabetes is 25% [4], and that of patients lying in bed after cerebral hemorrhage surgery is up to 30-60% [5]. The elderly and infirm are often accompanied by the depletion of blood and Yin and Yang, the children's viscera are delicate because of the insufficiency of Qi, and the pregnant women are full of Qi and blood. If the above-mentioned people have constipation, it is not suggested to take strong cathartics.

The academic school of Zheng's laryngology in Xin'an, founded in the year of 1521, began to take charge of laryngology as well as square pulse (both for children and adult) in 1711. Up to now, it has imparted and inherited for more than 500 years from generation to generation, forming the academic thought of "protecting the vitality and strengthening healthy energy" and "nourishing yin and caring for yin". Zheng's laryngology has accumulated a lot of experience in treating constipation since constipation is a common concomitant syndrome of throat disease. Zheng's laryngology is good at using warm and moist method to treat constipation. This method has the characteristics of promoting defecation without hurting the healthy energy, which is especially suitable for children, the elderly and the infirm. The experience of Zheng's laryngology in treating constipation is summarized as follows.

## 2. Classification and Etiology of Constipation

The causes of constipation are complex, which can be divided into functional constipation and organic constipation according to the causes; According to the location and cause of constipation, it can be divided into outlet obstructed constipation, mechanical intestinal obstruction and transmission obstruction constipation.

According to traditional Chinese medicine, constipation can be divided into hot constipation and

cold constipation due to the difference between cold and heat. Deficiency and excess constipation can be divided into empty constipation and solid constipation, which is the result of the dysfunction of the intestines.

Substantive-heat-type constipation is mainly caused by exogenous pathogenic heat and accumulated heat in diet, resulting in heat in the colon and difficulty in bowel movement. ① Overeating and long eating spicy, fat, sweet and thick taste will lead to heat accumulation in the intestines and stomach, relieve dereliction of duty, and block the intestines and organs. ② The evil heat invades the outside and spreads to the lung and stomach internally, causing heat accumulation in the lung and stomach, and yangming fu-viscera excess. The lung and large intestine are external and internal, and the heat in the lung meridian is transmitted to the intestines, causing heat constipation; The stomach is mainly responsible for receiving and lowering, and the spleen is responsible for the transportation and clearing. If the spleen and stomach fail to rise and fall, and the transportation is not adjusted, the intestines and viscera will fail, and the dregs will stagnate. Lung and stomach heat accumulation is the main cause of throat fever, and it is also the main cause of throat fever with constipation. ③ Heat enters the blood and passes to the heart meridian. The heat of the heart meridian moves down the small intestine, causing the burning of the heat and the enhancement of the clear and turbid secretion, resulting in dry feces and short and red urine; If the heart is inflamed, the mouth will sore. Deficiency heat constipation is exogenous pathogenic heat or elemental volume heat, and heat can damage yin; or heat disease, misuse the method, and damage the yin fluid; or the body is deficient in yin, yin does not control yang, and the deficiency heat burns the fluid, causing the loss of moisture in the intestines and the dry feces. It can be seen that yin injury is the common feature of heat constipation, regardless of the substantive-heat-type constipation or yin deficiency constipation.

Excessive cold constipation is caused by overeating, raw cold, or exogenous cold, which causes yin and cold to stagnate the stomach and intestines. If it is lost in transmission, the dross will not work. Deficiency cold constipation is caused by deficiency of spleen and kidney. The spleen governs the movement and the kidney governs the warmth. The function of the body depends on the promotion of the warm nourishment of the spleen and the kidney. Therefore, the deficiency of the spleen and the kidney will lead to the failure of the intestines to clear and lower, and the inability of transmission, resulting in the retention of dregs in the intestines.

### **3. Zheng's laryngology Advocates "Warm and Moist Method" to Treat Constipation**

Zheng's laryngology believes that the causes of constipation are complex. Although the disease is located in the intestine, it is closely related to the functions of lung, spleen, stomach, kidney, heart, etc. The viscera are based on actual function, and the viscera are based on un-obstruction. Therefore, when treating constipation, we should not only clear the internal organs, but also protect the internal organs and strengthen the internal organs. Therefore, we should use warm and moist method to treatment constipation.

#### **3.1. Cooling and Moistening Method is Adopted to Treat Heat Constipation**

Since Zhang Zhongjing (famous scholar of TCM in the Eastern Han Dynasty) created a method to use Dachengqi Decoction to treat yangming fu-viscera excess, later generations have followed this method to treat various heat constipation with Dachengqi Decoction and its addition and subtraction. For example, Sun Simiao (famous scholar of TCM in Tang Dynasty) thought that Dachengqi Decoction was not so effective in purging, therefor, based on the Dachengqi Decoction, he created gardenia decoction by adding bitter cold and heat clearing drugs such as gardenia and scutellaria baicalensis. Whether Chengqi Decoction or Gardenia Decoction, the core idea is to overcome the bitter cold, and the representative medicine is rhubarb. Rhubarb, with a strong cathartic effect, has a long history of medicinal use in China, and is widely used in various constipation clinically. It can clear both qi and heat, as well as blood and heat. It can treat heat constipation from the fundamental problem.

Zheng's laryngology believes that the hot knot constipation with yin injury is the common pathogenesis, regardless of substantive-heat-type constipation or deficiency heat constipation, so use rhubarb with caution. ① Rhubarb is easy to damage yin and cause dryness, aggravating constipation. As Zhang Gao of the Song Dynasty said, "the elderly, with little body fluid, are easy to suffer from constipation. Therefore, the treatment method should be to moisten the large intestine, instead of taking rhubarb blindly. Rhubarb can only be used to temporarily unblock, but long-term misuse can injure

body fluid, and will cause much more constipation." ② Rhubarb, as a bitter and cold medicine, can easily damage the vital energy. According to the *Theory of Blood Syndrome*, "bitter and cold medicine can greatly reduce vitality". Modern pharmacological studies have confirmed that bitter cold drugs can inhibit gastrointestinal motility, reduce gastrointestinal hormone secretion and reduce the protective function of gastric mucosal barrier when used for a long time or in large doses [6-8]. Researcher Luo Haihua and his colleagues found that the intestinal wall edema of mice would appear after being gave a large amount of coptis decoction for a long time, which is very similar to the intestinal wall edema caused by antibiotics [9]. Therefore, Zheng's laryngology should be cautious in using rhubarb, advocating the use of herbs such as rehmannia glutinosa (gaert.) and scrophulariae radix to nourish yin and cool down heat to cool and moisten the feces.

Rehmannia glutinosa (gaert.) and scrophulariae radix can be used to treat hot constipation, they have the following features. ① Heat-clearing: Rehmannia glutinosa (gaert.) and scrophulariae radix are sweet and cold in nature, which can clear the heat and blood; It can not only remove throat heat, but also clear intestines and viscera heat. It has the heat clearing effect similar to rhubarb. Scrophulariae radix belongs to the lung, stomach and kidney meridians, and the lung and large intestine are external and internal. Clearing the lung is easier to purge the large intestine and heat, so heat causes constipation in the large intestine, and clearing the lung can yield twice the result with half the effort; Rehmannia glutinosa (gaert.) enters into the heart, liver and kidney meridians, the combination of the two drugs can clear the heat of the five internal organs and disperse the phlegm and heat carbuncle around the body. ② Nourishing yin and consolidating yin: Both Rehmannia glutinosa (gaert.) and scrophulariae radix have the effect of nourishing yin and moistening dryness, which can strengthen the effect of clearing heat, prevent heat evil from hurting yin, and avoid the harm of rhubarb bitter dryness hurting yin. ③ Smoothing Intestine and Relieving Constipation: Rehmannia glutinosa (gaert.) and scrophulariae radix are moist in nature and good at clearing the intestines. Modern research believes that on the one hand, rehmannia glutinosa (gaert.) and scrophulariae radix treat constipation by down-regulating the contents of AQP3 and AQP9 to reduce the re-absorption of intestinal water; On the other hand, it can promote intestinal peristalsis by regulating gastrointestinal hormones and affecting intestinal nerve motor receptors [10]. Rehmannia glutinosa (gaert.) and scrophulariae radix can be used to cure heat constipation, remove heat and perverse trend, nourish body fluid, and smooth feces.

During the clinical treatment, it is required to increase or decrease with symptoms according to the severity of constipation, the rise and fall of heat and other concurrent symptoms. For those with severe constipation, it is suggested to add compound of Glauber-salt and Liquorice. The compound of Glauber-salt and Liquorice tastes salty and cold, and it has the functions of purging heat, relieving constipation, moistening dryness, softening hardness, clearing fire and detumescence by entering the stomach and large intestine. As *Theory of medicinal properties* mentioned: "It can cure the heat and irritability of the heart and the stagnation of the five internal organs." *Syndrome Herbal Medicine* mentioned "It can cure all kinds of heat and poison wind,... the five internal organs are secretive and astringent, and the intestines and intestines are blocked." The compound of Glauber-salt and Liquorice is anhydrous mirabilite, which is anhydrous sodium sulfate formed from mirabilite after weathering and losing crystalline water. According to the *Rihuzi's Materia Medica*, "the compound of Glauber-salt and Liquorice is a medicine that can nourish the intestines and nourish the dryness." Compared with mirabilite, it has the function of nourishing yin. Therefore, Zheng's laryngology uses it instead of mirabilite. Pharmacological studies show that its purgative effect may not be easily absorbed by the intestinal mucosa as well as  $\text{SO}_4^{2-}$  and  $\text{Mg}^{2+}$ . It forms a hypertonic salt solution in the intestine, absorbs a large amount of water to expand the intestine, causing mechanical stimulation, promoting intestinal peristalsis, and producing defecation effect [11]. In the case of excessive heat, gypsum is added to strengthen the clearing of lung and stomach heat. The gypsum tastes sweet and cold, and can relieve heat without hurting yin. According to the *Compendium of Materia Medica*, "gypsum can eliminate the symptoms of headache, body heat, triple coke fever, skin heat, stomach and diaphragm heat, relieve muscle sweating, relieve thirst and irritability, abdominal distension, wheezing, and throat heat". According to *Medication Mind Method*, gypsum is "a cold medicine for the stomach meridian, which can moisten the lung and remove heat, disperse yin and evil, and slow the spleen and replenish qi". According to Zhang Xichun's *Chinese Medical Records*, gypsum is "pure and good in nature", "gypsum is used to treat exogenous heat without hurting people, and it can be used boldly, and it can also be used to treat fever". As for the yin deficiency of lung and stomach, ophiopogon japonicus and glehniae radix can be added to nourish yin, clear heat, increase fluid and moisten intestines. The deficiency of liver and kidney yin should be supplemented with rehmanniae radix praeparata, eclipta herba, euodia rutaecarpa and angelica sinensis to nourish the liver and kidney, moisten the intestines and relieve

constipation.

The *rehmannia glutinosa* (gaert.) and *scrophulariae radix* are mild in nature and taste. When used together, they can not only moisten the intestines and relieve constipation, but also nourish yin and clear heat. Compared with rhubarb, they can be used in a wider range of applications, both for empirical and deficiency syndromes, especially for children, the elderly and those with physical deficiency. Zheng's Laryngeal uses the cooling and moistening method to treat heat constipation, reflecting the academic thought of Zheng's Laryngeal to treat heat and consolidate yin<sup>[12]</sup>.

### 3.2. Using Warm and Moist Method to Treat Cold Constipation

The warm and moist method is to treat constipation caused by cold accumulation in the body. The representative prescriptions include rhubarb and emergency pill of three ingredients. Rhubarb and aconite decoction is used to treat constipation caused by internal cold and yang qi stagnation, and emergency pill of three ingredients is used to treat constipation caused by cold excess and cold accumulation. Rhubarb is a common drug for defecation in these two formulas, which has a strong effect on cleaning the intestines; Croton tiglium is pungent, warm, dry, and toxic. Its purgative effect is particularly strong. These two drugs are extremely vulnerable to damage yang and yin, and cannot be used more; Aconite and dried ginger can warm the yang and disperse the cold, and the pungency and dryness easily damage the yin, while the tonifying power is weak. However, those with cold constipation are often accompanied by yang deficiency, and the cold evil stagnates in the stomach and intestines, which is easy to consume yang. Therefore, although the warming method can relieve constipation symptoms, it is easy to commit the warning of deficiency. Therefore, it can only be used temporarily and cannot be used for a long time, and the long-term effect is not good. It is often necessary to adjust and supplement with drugs that warm yang and replenish qi. For example, Zhang Linjun et al.<sup>[13]</sup> used rhubarb aconite decoction, cassia twig, radix glycyrrhizae preparata, and magnolia officinalis to treat constipation patients with deficiency of spleen and kidney and accumulation of cold solid in the body. After medication, the feces were smooth, but the deficiency of spleen and kidney was not recovered. Subsequently, they were treated with tonifying Ginseng Guipi Pill and Shenqi Pill for 3 months.

Zheng's laryngology treats cold constipation by advocating the use of *cistanche deserticola*, *rehmanniae radix praeparata*, and *angelica sinensis* to warm yang and dissipate cold, invigorate the kidney and essence, and moisten the intestines and relieve constipation.① Invigorating yang and dissipating cold. *Cistanche deserticola* is sweet and warm to replenish yang. When yang is full, cold will naturally disperse. If the outside is cold and the condensation is heavy, ephedra, *asarum* and cinnamon can be added. These three herbs all enter the lung meridian, and the lung and the large intestine are external and internal, which can not only warm and disperse cold pathogenic factors, but also promote the lung and the viscera, and promote the transmission of drugs. For those who are seriously cold inside, *aconiti lateralis radix praeparata*, cinnamon and dried ginger to warm the yang and dissipate the cold. For those with deficiency and cold, add *radix codonopsis*, *astragali radix praeparata cum melle* and *fried atractylodes macrocephala*, etc. to replenish qi and yang. If necessary, add *aconiti lateralis radix praeparata*, and cinnamon to warm yang and replenish qi.② Yin and yang complement each other. Yin and Yang are fundamental and interdependent; Mutual support and promotion, and the yang without yin is like a tree without roots. *Cistanche deserticola* is sweet and warm, belongs to the kidney and large intestine meridians, and nourishes the kidney yang and blood essence to achieve yin and yang. In the book of *Continuation of Chonglou Jade Key*, it can be found a saying goes "The function of *rehmanniae radix praeparata* is particularly great." It can replenish qi and blood, nourish kidney water, replenish bone marrow, benefit genuine yin, and specifically replenish the vitality of the kidney<sup>[14]</sup>. It can not only replenish kidney yin, but also generate yang with yin. *Angelica sinensis* is the holy medicine for nourishing blood. It generates yang by nourishing blood and nourishing yin. *Rehmanniae radix praeparata* and *angelica sinensis* replenish kidney yang by tonifying yin, and seek yang from yin.③ Smoothing intestine and relieving constipation. *Cistanche deserticola*, *angelica sinensis* and *rehmanniae radix praeparata* are sweet, warm and moist, all of which have the function of smoothing intestines and relieving constipation. The sweet and salty substance of *cistanche deserticola* moistens the large intestine, which can not only directly moisten the intestines and relieve constipation, but also promote the movement of qi, blood and body fluid through the function of warming yang and benefiting qi, thus improving the ability of the intestine to transmit drugs. *Angelica sinensis* and *rehmanniae radix praeparata* can nourish blood and nourish yin, moistening intestines and relieving constipation. Yang Shengjie et al.<sup>[15]</sup> found that the total oligosaccharides of *cistanche deserticola*, the total oligosaccharides of galactosyl and galactosyl can enhance intestinal peristalsis and

effectively improve the motor function of intestinal muscles. Wang Changming<sup>[16]</sup> et al. confirmed through experiments that angelica sinensis may play the role of "moistening and defecating" by reducing the content of various factors in the colon AC-cAMP-PKA signal pathway, down-regulating the expression of AQP4 in the proximal colon, reducing the absorption of intestinal water and increasing the content of intestinal water. Cistanche deserticola, angelica sinensis and rehmanniae radix praeparata also regulate the conduction function of large intestine by tonifying liver, kidney and spleen. Huang Yuanyu said in the *Spirit Pivot Emblem • Choke Diaphragm Solution* that "the right of food and drink to eliminate corruption lies in the spleen, and the right of fecal drowning and drainage, and the duty lies in the liver, which is carried forward by the liver, while the dregs are full, which hinders the distribution and drainage of qi, so the two yin can be destroyed and the two yin can be discharged." The combination of the three drugs can promote the excretion of two stools by regulating the liver and kidney, strengthening the spleen and stomach. If the constipation is severe, pumpkin seeds, trichosanthes seeds, or rehmannia glutinosa (gaert.), scrophulariae radix, and Glauber-salt and Liquorice to remove the nature and store them to enhance the function of moistening intestines and relieving constipation.

Warming and moistening therapy for cold constipation is to achieve the effect of strengthening treatment through warming and moistening. It is the embodiment of Zheng's theory of laryngology and yuan protection<sup>[17]</sup>. It is a strategy to treat cold constipation in essence, and can be used by children, the elderly and the infirm.

#### 4. Conclusion

Zheng's laryngology treats hot and cold constipation with sweet and moist method, which not only embodies the thought of Zheng's laryngology to nourish yin and protect yuan; It also embodies the concept of Zheng's special prescriptions for laryngeal diseases and implementation as appropriate; The selected drug has a mild taste, small side effects, and it is suitable for the elderly, children and the infirm. It is widely applicable to the population, and is worthy of clinical promotion and application.

#### Acknowledgement

Construction Project of the Inheritance Workshop of Zheng's Laryngology Academic School of Xin'an Medicine in Anhui Province of the National Administration of Traditional Chinese Medicine (GZYYRJH [2019] No. 62); Construction Project of the Inheritance Workshop of National Old and Famous Experts of TCM of the National Administration of Traditional Chinese Medicine (GZYJRJH [2018] No. 134).

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