

# Research Progress and Application Prospect of Chengyin Decoction (Granule)

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**Abstract** Research and development of Chengyin detoxification prescription are taken as research objects. Starting from preparation research and development, clinical research, urgency and market demand, and significance for industrial development, the relevant research of Chengyin detoxification prescription is systematically reviewed, and the application prospect of the ethnic medicine preparations is looked forward to.

**Key words** Chengyin detoxification prescription, Research progress, Application prospect

## 1 Introduction

Chengyin Decoction (Granule) is summarized by Professor Qin Zujie, a famous traditional Chinese doctor in Guangxi, through more than 30 years of clinical practice, and is used for empirical prescription of acute tonsillitis of wind-heat type, acute pharyngitis and other acute diseases of throat-Chengyin detoxification prescription. It is composed of *Clerodendrum Japonicum*, *Lonicerae Japonicae Flos*, *Forsythiae Fructus* and *Radix Rhizoma Glycyrrhizae*, and focuses on clearing heat, detoxicating, reducing swelling, and relieving pain. *Clerodendrum Japonicum* is from *Clerodendrum japonicum* (Thunb.) Sweet. of *Clerodendrum* of Verbenaceae, which is sweet in taste and cool in nature, and is local characteristic medicinal material of Guangxi. It was firstly recorded in the *Southern Vegetation*, with the effects of clearing heat, detoxicating and detumescence<sup>[1-2]</sup>, and is the sovereign in the prescription. *Forsythiae Fructus* is bitter and slightly cold, enters the heart, lung and gallbladder channels, and has the effects of clearing heat and detoxicating, evacuating wind-heat, eliminating carbuncle and dispersing nodules<sup>[3-4]</sup>. *Lonicerae Japonicae Flos* is sweet and cold, enters lung, heart, and stomach channels, and can evacuate wind heat, clear heat and detoxify. It not only clears

the heat of qi, but also relieves the poison of blood<sup>[5]</sup>. *Forsythiae Fructus* and *Lonicerae Japonicae Flos* are both the minister in the prescription. *Radix Rhizoma Glycyrrhizae* is sweet in taste and mild in nature, and enters lung, spleen, stomach, and heart channels, with the functions of clearing heat and detoxifying, expelling phlegm and arresting cough, relieving spasm and pain, and harmonizing various drugs<sup>[6]</sup>, and is assistant medicine in the prescription. The combination of four drugs in the prescription can eliminate wind heat, swelling and pain. Scanning the whole prescription, the taste is sweet and slightly bitter, and the nature is cold, which can clear the heat, to clear the wind heat in the lung channel. The sweet and cold are combined, which can clear the heat, and take into account the deficiency of yin and jin caused by the burning of heat evil. The spicy and cool are combined with bitter and sweet, and the compatibility is appropriate. The prescription follows the principle of "the wind is in the interior, and the spicy and cool are used for treatment, assisted with bitter and sweet" in the *Inner Canon of the Yellow Emperor*.

## 2 Research and development of the ethnic medicine preparation Chengyin Decoction (Granule)

The traditional Chinese medicine preparation Chengyin Decoction (Granule) is a traditional Chinese medicine compound preparation developed according to the theory of traditional Chinese medicine (Zhuang medicine), which classically reflects the structure and compatibility law of traditional formula, and has broad representativeness and methodological research value. Through consulting modern literature, it is found that there is no relevant research on Chengyin Decoction at present. This prescription is summarized by Professor Qin Zujie, a famous traditional Chinese doctor in Guangxi, on the basis of the basic principle of "syndrome differentiation and treatment" in the treatment of diseases by traditional Chinese medicine, through a lot of clinical practice experience. After repeated and careful clinical research, it is used for treating acute tonsillitis of wind-heat type, acute pharyngitis and other acute diseases of throat<sup>[7]</sup>. It has been used clinically for many

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years, and it is safe and effective without obvious toxic and side effects. Research content of ethnic medicine preparation Chengyin Decoction (Granule) mainly includes extraction and preparation process; TLC identification and content determination of index components; pilot production test; stability test of preparation; preparing the quality standard of Chengyin Decoction (Granule). The ultimate goal of the project is to ensure the controllable and stable quality of Chengyin Decoction (Granule), standardize the quality standard of Chengyin Decoction (Granule) and the design and improvement of the extraction process of the index components, in accordance with the relevant requirements of the preparation of the traditional Chinese medicine national medicine hospital, so as to provide experimental basis for the clinical rational use.

### 3 Clinical research of Chengyin Decoction (Granule)

The clinical observation shows that Chengyin Decoction can significantly improve the clinical symptoms, signs and laboratory indicators of acute tonsillitis of wind-heat type, suggesting that Chengyin Decoction is an effective prescription for the treatment of acute tonsillitis of wind-heat type. Additionally, Chengyin Decoction has no obvious toxic and side effects, and the cost is cheap, which is worth further research and application<sup>[7]</sup>. Chengyin Decoction (Granule) is composed of *Clerodendrum Japonicum*, *Lonicerae Japonicae Flos*, *Forsythiae Fructus* and *Radix Rhizoma Glycyrrhizae*, with the effects of clearing heat and toxin, removing wind and toxin, reducing swelling and pain, and ventilating the airway. It is mainly used to treat sore throat, swollen throat nucleus, dysphagia, sore throat, hoarse voice, itchy throat, cough, dry throat or foreign body sensation caused by wind-heat toxin. From July of 2019 to September of 2021, 104 patients with tonsillitis were observed, and overall clinical effect of Chengyin detoxification prescription reached 90.39%. The main diseases of western medicine include acute tonsillitis, acute suppurative tonsillitis, acute pharyngitis, chronic pharyngitis, *etc.* The total effective rate of each disease is 87.5%–96.55%. The curative effect is accurate, and there is no obvious adverse reaction. The safety is high, and the patient is well tolerated. In clinical practice, many patients reported that the decoction was difficult to cook, and it took time and energy to cook temporarily before taking it. In contrast, the mixture (granule) not only maintains the characteristics of rapid absorption and obvious effect of the decoction, but also overcomes the shortcomings of temporary cooking before taking the decoction, consuming time and energy, and easy to mildew after being stored for a long time. Moreover, it is small in size, easy to carry, suitable in taste, which improves the patient's compliance with medication.

### 4 Urgency and market demand

By completing the data analysis and experimental research of the relevant experimental research on the hospital preparation of Chengyin Decoction (Granule), the materials are submitted to the

provincial drug administration for filing. The ethnic medicine preparation products are made, and the products are legalized. It facilitates mass production and clinical use, can improve the quality and competitiveness of the hospital preparation products of the traditional Chinese medicine and ethnic medicine, and increase the sales volume. At the same time, it can be developed into Guangxi characteristic hospital preparations of traditional Chinese medicine and ethnic medicine in the future, which can promote the economic development of the region, build the ethnic medicine industry chain, and strengthen the advantages of Guangxi ethnic medicine. This distinctive hospital preparation of Guangxi ethnic medicine is used to treat acute pharyngeal diseases such as wind-heat type acute tonsillitis and acute pharyngitis, with remarkable effect. It will certainly add new vitality to the hospital preparation of Guangxi ethnic medicine, bring new hope to the majority of patients, and play a demonstration role for the development of Guangxi characteristic traditional Chinese medicine and ethnic medicine.

At present, the hospital preparation of Chengyin Decoction (Granule) is put into clinical use in the form of agreed decoction or clinical prescription, and the clinical use is gradually increasing. Applying for the hospital preparation of traditional Chinese medicine and ethnic medicine makes the preparation legal and can be produced in large quantities. It makes the application of hospital preparation more extensive, and the demand is greater, which means that the application of Zhuang medicine and Chinese medicine for the hospital preparation of Chengyin Decoction (Granule) is more extensive. This has played a positive role in promoting the planting of Zhuang medicine and traditional Chinese medicine, expanded the planting scale of traditional Chinese medicine and drove the economic development of the region. In accordance with the requirements of standardization, controllability and scale, the whole production process of the medicinal materials and their patent medicines is improved, which is convenient for the application and promotion of relevant pharmaceutical enterprises, simple and feasible, economical and applicable, with good economic benefits. In accordance with the standards and requirements of the national and autonomous region drug and its hospital preparation, on the basis of strengthening the quality standards and stability of the hospital preparation of Chengyin Decoction (Granule), the production level of the preparation should be continuously improved, and scientific and operational preparation quality standards should be formulated, and the production efficiency should be improved, to meet the needs of the hospital, and promote the standardization process of the modern Chinese medicine industry.

### 5 Important significance for industrial development

Since the 18<sup>th</sup> National Congress of the Communist Party of China, General Secretary Xi Jinping has made a series of important statements and instructions on the work of traditional Chinese medicine, providing fundamental guidance for the revitalization and development of traditional Chinese medicine in the new era. The

CPC Central Committee and the State Council have made strategic deployment and top-level design for the work of traditional Chinese medicine in the new era, issued the *Law of the People's Republic of China on Traditional Chinese Medicine*, the *Planning Outline of Development Strategy of Traditional Chinese Medicine* (2016 – 2030)<sup>[8]</sup>, and the *Opinions of the CPC Central Committee and the State Council on Promoting the Inheritance, Innovation and Development of Traditional Chinese Medicine*<sup>[9]</sup>, and implemented major projects for the revitalization and development of traditional Chinese medicine. The development of traditional Chinese medicine has ushered in a favorable situation for the time, place and people<sup>[10]</sup>. The Administration of Traditional Chinese Medicine of Guangxi Zhuang Autonomous Region publicizes the "Ten Flavors of Guangxi" authentic medicinal materials and regional characteristic medicinal materials, and determines the "Ten Flavors of Guangxi" and 31 regional characteristic medicinal materials as Guangxi regional characteristic medicinal materials, in order to comprehensively promote the research and promotion of Guangxi's authentic and regional characteristic traditional Chinese medicine, and help the sustainable development of Guangxi's traditional Chinese medicine industry.

Promoting the high-quality integration of traditional Chinese medicine into the joint construction of the "the Belt and Road" is an important part of promoting the high-quality development of the "the Belt and Road", and also an important carrier of promoting the construction of a community of human health. During the "14<sup>th</sup> Five-year Plan" period, how to integrate Chinese medicine into the construction of the "the Belt and Road" in a high-quality manner, the *Development Plan for Promoting the High-quality Integration of Chinese Medicine into the Joint Construction of the "the Belt and Road"* (2021 – 2025) jointly issued by the State Administration of Traditional Chinese Medicine and the Office of the Leading Group for Promoting the Construction of the "the Belt and Road" pointed out the direction<sup>[11–13]</sup>. The development of the hospital preparation of Chengyin Decoction (Granule) is conducive to the widespread use in clinic, and can also be dispensed to other medical units in the region, which makes the application prospect of the hospital preparation of Chengyin Decoction (Granule) more extensive, and the demand is greater. It also means that the application of Zhuang medicine and Chinese medicine of the hospital preparation of Chengyin Decoction (Granule) is more extensive, and the demand is greater. These have played a positive role in promoting the planting of Zhuang medicine and traditional Chinese medicine, expanded the planting scale of traditional Chinese medicine and drove the economic development of the region.

The formulation of the quality standard of Chengyin Decoction (Granule) hospital preparations and the improvement quality standard of decoction pieces can improve the product quality and competitiveness of hospital preparations based on this medicinal material, increase sales volume and improve efficiency. It can promote the quality of this medicine to develop in the direction of high quality and efficiency, drive the development of relevant tra-

ditional Chinese medicine and Zhuang Yao medicine planting industry, promote the improvement of the quality of Guangxi characteristic ethnic medicine, and ensure the production, sales and use of high-quality and efficient drugs.

Traditional Chinese medicine is the treasure of traditional medicine in China. The prepared pieces of traditional Chinese medicine, traditional Chinese medicine and traditional Chinese patent medicine have become the major pillar of the traditional Chinese medicine system, an important part of the clinical prescription of traditional Chinese medicine, and an important carrier of traditional Chinese medicine culture. With the development of modernization of traditional Chinese medicine, traditional Chinese medicine slices have been accepted and recognized by more and more patients because of their obvious advantages in treating chronic diseases and complicated diseases<sup>[14–17]</sup>. In a word, it should carry out the research on the whole industrial chain of the development and clinical application of hospital preparations of authentic medicinal varieties, and develop hospital preparations with definite curative effects, to provide more choices for patients, and improve the quality of life. The development of ethnic medicine preparations is conducive to promoting the sustainable development of Zhuang and Yao medicine and traditional Chinese medicine industries, expanding the application fields of traditional Chinese medicine, and improving the economic benefits of planting. The research and development of products is conducive to industrial development, and is of necessity and urgency for the demonstration development of authentic traditional Chinese medicine varieties, and also of great social and economic significance.

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**3.6 S: Summary** Summary is to sort out the content of this lesson. Some people compare the class summary to the "ending" or "finishing touch" of Go, which shows the important role of summary in classroom teaching. Teachers can summarize by writing on the blackboard, mind mapping and memorizing formulas. A good summary can make students think and explore further on the basis of classroom teaching, and make clear the important and difficult points of the content, which is helpful to improving students' autonomous learning ability and creative ability.

For example, when talking about the concept of derivative, the class summary is as follows: (i) The concept of derivative: the limit of incremental ratio; (ii) The geometric meaning of derivative-slope; (iii) Find derivative by definition-three steps: find increment; calculate the ratio; find the limit; (iv) A function that can be derived must be continuous, but a function that is continuous is not necessarily derivable.

## 4 Conclusion and discussion

Guangxi University of Chinese Medicine is now actively implementing BOPPPS teaching module, aiming to make teachers change the previous teaching mode and devote themselves to the reform of education and teaching. Compared with traditional teaching, BOPPPS teaching module has great advantages. Teachers need to study the theoretical knowledge of BOPPPS teaching module and constantly explore how to apply it to the class imperceptibly. In fact, it is obviously not possible to apply BOPPPS teaching module directly to our teaching overnight, and it will take a long time to explore and study here. However, it is believed that it is feasible to learn from the advantages of BOPPPS teaching module for solving some problems existing in teaching. In specific teaching,

there is no fixed and universal method, everything depends on people and circumstances, so the key to the effectiveness of an effective class is to let students get something. As long as the goal of teaching and learning can be achieved, all legal and reasonable methods can be adopted. In the future teaching practice, with the support of the leaders of the college, we will explore together with the team teachers of the teaching and research section, change the teaching concept, gradually improve the teaching methods, apply the advantages of BOPPPS teaching module to the teaching practice of medical higher mathematics course in Guangxi University of Chinese Medicine, and constantly try to solve the problems in the current medical higher mathematics teaching with BOPPPS teaching module.

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