

Summary of Professor Guo Shuwen's Academic Thoughts and Experience in Diagnosing and Treating Heart Failure

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Abstract: Professor Guo Shuwen is a mentor for the seventh batch of national academic experience inheritance work for veteran traditional Chinese medicine experts, the head of the expert team for the Beijing Famous Traditional Chinese Medicine Practitioners' Support Project, the mentor for the third batch of ChaoYang District Famous Traditional Chinese Medicine Experts' grassroots and academic experience inheritance project, the mentor for the ninth batch of national excellent doctoral dissertation in traditional Chinese medicine, the recipient of the Outstanding Contribution Award for Innovation and Entrepreneurship at Beijing University of Chinese Medicine, and an evaluation expert for special projects of the Ministry of Science and Technology, the Ministry of Education, and national natural science foundation projects. With 39 years of medical experience, he is primarily dedicated to the clinical practice, teaching, and scientific research of cardiovascular diseases. He inherits the classics, adheres to principles while innovating, possesses a unique understanding of heart failure, and has developed a distinctive diagnostic and treatment approach. He believes that deficiency of heart-Yang Qi is the fundamental pathogenesis of heart failure, blood stasis and fluid retention are its core pathological products, and fluid invading the lungs is the key to acute exacerbations of heart failure. He advocates supplementing Qi and invigorating Yang to address the root cause, and draining the lungs and promoting diuresis to treat the symptoms. He also emphasizes that heart failure should be treated in stages. During acute exacerbations, the main methods are nourishing Qi and boosting Yang, and purging the lungs and promoting diuresis. During remission periods, the focus shifts to nourishing Qi and boosting Yang, promoting blood circulation to remove blood stasis, and strengthening the body's vital energy and foundation.

Keywords: Guo Shuwen; Experience of renowned veteran Chinese medicine practitioners; Heart failure; Method of nourishing Qi and invigorating Yang purging the lung and promoting diuresis

Online publication: September 30, 2026

1. Introduction

Heart failure (HF) is a complex clinical syndrome resulting from structural or functional abnormalities of the heart that impair ventricular filling or ejection capacity. It represents the terminal stage of various

cardiovascular diseases and remains associated with persistently high morbidity and mortality worldwide, imposing a heavy burden on public health systems ^[1]. Modern medicine has made remarkable progress in the treatment of HF, particularly with the application of pharmacological agents such as angiotensin receptor–neprilysin inhibitors (ARNIs) and sodium–glucose cotransporter 2 inhibitors (SGLT2i), as well as the widespread use of device-based therapies including cardiac resynchronization therapy and implantable cardioverter-defibrillators, which have greatly improved the prognosis of some patients ^[2]. Nevertheless, clinical practice still faces numerous challenges, such as suboptimal symptom control, limited improvement in quality of life, adverse drug reactions, recurrent episodes, and high hospitalization rates ^[3]. Moreover, for heart failure with preserved ejection fraction (HFpEF), there remains a lack of effective therapies that definitively reduce mortality ^[4]. These unmet clinical needs continue to drive the exploration of novel therapeutic strategies within the medical community.

In traditional medical systems, Chinese medicine classifies HF as “palpitations”, “severe palpitations”, “dyspnea syndrome”, “edema”, and “cardiac edema”, with a long history of documented understanding ^[5]. Traditional Chinese medicine (TCM) theory holds that the heart governs the blood vessels, and that the propelling and warming actions of heart Qi and heart Yang are essential for maintaining normal blood circulation. The core pathogenesis of HF is generally summarized as “root deficiency with branch excess”, with the deficiency of heart Yang and Qi as the root, and blood stasis and fluid retention as the branch ^[6]. This central pathogenetic view of “heart Qi deficiency, blood stasis, and fluid retention” not only focuses on the heart itself but also emphasizes the interconnections with other zangfu organs, including the lung, spleen, kidney, and liver, forming a diagnostic and therapeutic feature of holistic syndrome differentiation and five-organ correlation ^[7]. This epistemology, which starts from the overall functional state and dynamically captures the evolution of disease, provides a unique theoretical framework for TCM intervention in HF.

HF is the terminal stage of various cardiovascular diseases, such as coronary heart disease, arrhythmias, cardiomyopathies, and hypertension, all of which can lead to HF ^[1]. However, with the changing disease spectrum, the proportion of HF attributable to coronary heart disease has been increasing. An epidemiological survey of cardiovascular diseases conducted at a hospital in Shanghai from 2019 to 2021 showed that coronary heart disease accounted for as high as 47.92% of HF cases ^[8]. Based on this, Professor Guo Shuwen, building upon the principle of “supplementing Qi and activating blood circulation” for treating coronary heart disease, proposed the important academic doctrine of “supplementing Qi, invigorating Yang, draining the lung, and promoting diuresis” for HF treatment. This approach aims to reverse the declining trend of Yang Qi and rapidly alleviate the critical condition of fluid retention attacking the lung, representing a model of simultaneous reinforcement and elimination. Its core lies in addressing the complex pathogenesis of “heart Yang and Qi deficiency, blood stasis and fluid retention, and fluid attacking the lung” by adopting a comprehensive strategy of “supporting the upright and dispelling the pathogenic, and treating both heart and lung simultaneously”. This doctrine profoundly embodies the holistic concept and the essence of syndrome-based differentiation in TCM treatment of acute and critical illnesses.

2. Understanding the pathogenesis of heart failure

Although the term “heart failure” does not appear in ancient TCM texts, based on its clinical manifestations—such as dyspnea, edema, palpitations, and fatigue—it has been classified under categories such as “cardiac edema”, “dyspnea syndrome”, “palpitations”, “heart impediment”, “severe palpitations”, and “edema” ^[5].

The Suwen·Wei Lun states: “The heart governs the blood vessels of the whole body”, clearly indicating the heart’s function of propelling blood circulation. Adequate heart Qi is a prerequisite for normal blood movement. The Suwen·Zhi Zhen Yao Da Lun states: “All dampness, edema, and fullness belong to the spleen”; and the Suwen·Shui Re Xue Lun states: “Its root is in the kidney, its end in the lung, and both are associated with water accumulation”. These statements indicate that edema is closely related to dysfunction of the lung, spleen, and kidney, forming the theoretical origin of “its control lies in the spleen and its root lies in the kidney” for HF. The term “cardiac edema” first appeared in the Jin Gui Yao Lue·Shui Qi Bing Mai Zheng Bing Zhi: “Cardiac edema manifests as heaviness of the body, shortness of breath, inability to lie down, restlessness and agitation, and genital edema”. This description closely matches the typical symptoms of HF patients, including dyspnea, orthopnea, irritability, and lower extremity and genital edema. The text also established the therapeutic principle of “warming Yang and promoting diuresis” and provided classic formulas, such as Zhenwu Decoction for warming kidney Yang to promote diuresis, and Linggui Zhugan Decoction for warming heart and spleen Yang to resolve fluid retention, which remain classic prescriptions for HF treatment today. The Shanghan Lun discusses various critical conditions caused by Yang deficiency and fluid retention and provides emergency formulas, reflecting the concept of “supporting Yang and securing the root”, which is of significant guiding value for the treatment of acute exacerbations of HF.

Based on the inheritance of classics and combined with modern pathology, Professor Guo Shuwen believes that heart failure is a complex and dynamic process in which lesions in the heart itself affect other zang-fu organs. The disease is located in the heart but often involves the lung, spleen, kidney, and liver. In terms of nature, it is generally characterized as root deficiency with branch excess, with intermingled deficiency and excess. The pattern of evolution: in the early stage, it mainly presents as heart Qi deficiency, which then progresses to heart Yang deficiency with the appearance of blood stasis; as Yang deficiency further worsens, fluid retention and phlegmturbidity accumulate, causing generalized edema and invading the heart and lung; in the advanced stage, Yang deficiency may impair yin, leading to the critical condition of dual deficiency of both yin and yang. This profound understanding provides a solid theoretical basis for the TCM therapeutic principles of “supplementing Qi, invigorating Yang, activating blood circulation to remove stasis, and draining the lung to promote diuresis”, and has enabled TCM to play a unique role in improving symptoms, enhancing quality of life, and reducing rehospitalization rates in HF patients.

Professor Guo Shuwen, through indepth study of the classics, summarized the pathogenesis of HF as follows:

- (1) Deficiency of heart Qi and Yang is the fundamental pathogenesis of HF. The heart governs Yang Qi, and the decline of heart Yang is the primary driving force behind HF. Deficiency of heart Qi leads to weakened blood propulsion, resulting in blood stasis; deficiency of heart Yang fails to warm and transform body fluids, leading to internal retention of fluid. This is the principle of “edema due to Yang deficiency”.
- (2) Blood stasis and fluid retention are the core pathological products of HF. Blood stasis and fluid retention mutually interact and spread throughout the triple burner. Stagnant blood obstructs the collaterals, further hindering the circulation of Qi and body fluids, thereby exacerbating fluid retention; conversely, widespread fluid retention obstructs the free flow of Yang Qi and damages heart yang.
- (3) Fluid attacking the lung is the key to acute exacerbations of HF. When fluid retention ascends and obstructs the lung, lung Qi becomes congested, and the lung’s dispersing and descending functions are

impaired. This is the direct cause of acute worsening of HF, manifesting as wheezing, inability to lie flat, and coughing up frothy sputum (pulmonary edema), indicating that the disease has shifted from the heart to the lung and signifies a critical condition.

3. Basic therapeutic principles

Adhering to the principle of “treating the root cause while addressing the branch manifestations”, and targeting the core pathogenesis of “root deficiency and branch excess” in HF, the following treatment strategies are established.

3.1. Strengthening the root and consolidating the foundation – The major approach for treating the root

This addresses the deficiencies of heart Qi, Yang, Yin, and blood.

3.1.1. Supplementing Qi and invigorating Yang method

This is the most core and commonly used therapeutic method.

- (1) Indications: Suitable for HF patients presenting with manifestations of heart Qi and Yang deficiency, such as palpitations, shortness of breath, fatigue, spontaneous sweating, chilliness, and cold extremities. This method is key to improving cardiac function and providing cardiac energy.
- (2) Supplementing Qi: Vigorously replenish heart Qi using herbs such as Astragalus (Huangqi), Ginseng (Renshen), and Codonopsis (Dangshen), aiming to restore the heart’s basic function of propelling blood circulation and providing the driving force for “activating blood”.
- (3) Invigorating yang: Warm and invigorate the declining heart Yang using herbs such as Aconite (Fuzi), Cinnamon (Guizhi), and Dried Ginger (Ganjiang). When heart Yang is restored, it can warm the body and transform fluids, fundamentally preventing the generation of fluid retention. This is the principle of “enhancing the source of fire to dispel the overcast”.
- (4) Commonly used formulas include: Bao Yuan Tang to supplement heart Qi, Shen Fu Tang to rescue heart Yang, and Zhen Wu Tang to warm kidney Yang and thereby support heart Yang. Clinical practice frequently adopts Zhen Wu Tang from the Treatise on Febrile Diseases (Shang Han Lun) combined with Tingli Dazao Xiefei Tang from the Essentials from the Golden Cabinet (Jin Gui Yao Lue) as the foundational prescription, with modifications based on individual conditions. Zhen Wu Tang embodies the principle of “supplementing Qi, activating Yang, and promoting diuresis”, while the addition of Tinglizi (Semen Lepidii) and Sangbaipi (Cortex Mori) reflects the strategy of “draining the lung”. This is often combined with blood-activating and stasis-resolving herbs, such as Danshen (Salviae Miltiorrhizae Radix), Yimucao (Leonuri Herba), and Zelan (Lycopi Herba), to address the concomitant pathogenesis of “blood stasis”, thereby embodying the holistic approach of “regulating water and blood simultaneously”.
- (5) The combination of Fuzi (Aconiti Lateralis Radix Praeparata) with HuangQi (Astragali Radix) serves to supplement Qi, warm Yang, strengthen the heart, and consolidate the root. The pairing of Tinglizi with Dazao (Jujubae Fructus) drains the lung and relieves dyspnea without compromising healthy Qi. The compatibility of Guizhi (Cinnamomi Ramulus) with Fuling (Poria) warms and unblocks heart Yang, transforms Qi, and promotes diuresis.

This therapeutic approach serves as the cornerstone of treatment, adhering to the principle that “where there is a trace of Yang Qi, there is a ray of vitality”.

Difference between “supplementing Qi and invigorating Yang” and “supplementing Qi and warming Yang”: “Invigorating Yang” emphasizes “functional stimulation”—the term “invigorate” implies arousing, stimulating, and elevating. It does not directly replenish the material basis of Yang qi; rather, by greatly supplementing the primordial Qi, it enables sufficient Qi to propel, stimulate, and elevate the clear Yang of the spleen and stomach. The core issue it addresses is “sufficient Qi but stagnant yang”. “Warming yang” emphasizes “state of warmth”—the term “warm” implies heating and dispelling cold. “Warming Yang” directly supplements and warms the deficient Yang Qi of the body. Since Yang deficiency often develops from Qi deficiency, it is usually combined with Qi-supplementing methods, i.e., “supplementing Qi and warming yang”. The core issue it addresses is “Yang deficiency leading to internal cold”.

Based on this differentiation between “invigorating yang” and “warming yang”, Professor Guo Shuwen places particular emphasis on supplementing Qi in clinical practice, while also paying attention to stimulating the body’s own Qi in terms of generation, ascent, and descent, fully leveraging the propelling, stimulating, and warming effects of Qi. He commonly uses herbs such as Astragalus, Ginseng, Codonopsis, and Pseudostellaria (Taizishen), and rarely uses highly hot and toxic herbs like Aconite and Aconitum (Wutou); even when used, they are started at small doses to ensure medication safety.

The academic thought of “supplementing Qi, invigorating Yang, draining the lung, and promoting diuresis” is highly consistent with modern HF treatment principles: “supplementing Qi and invigorating Yang” is analogous to cardiogenic effects and improving myocardial energy metabolism, such as positive inotropic agents. “Promoting diuresis” directly corresponds to the use of diuretics to reduce cardiac preload. “Draining the lung” effectively alleviates symptoms of acute pulmonary edema. The overall therapeutic approach reflects a holistic regulation of the neuroendocrine system rather than single-target intervention.

3.1.2. Supplementing Qi and nourishing Yin method

- (1) Indications: Suitable for HF patients with prolonged disease or coexisting diabetes mellitus, presenting with manifestations of dual deficiency of both Qi and Yin, such as shortness of breath, fatigue, dry mouth and throat, feverish sensation in palms and soles, and red tongue with little coating. Commonly seen in diastolic HF or after long-term diuretic use.
- (2) Representative formula: Shengmai San is the basic formula for supplementing Qi and nourishing yin; Zhigancao Decoction (or Baked Licorice Decoction) for supplementing Qi and nourishing yin, unblocking Yang and restoring the pulse.
- (3) Commonly used medicinal herbs: Panax ginseng / Panax quinquefolius (American ginseng), Ophiopogon japonicus (dwarf lilyturf), Schisandra chinensis (five-flavor berry), Polygonatum odoratum (fragrant Solomon’s seal), and Rehmannia glutinosa (Chinese foxglove).

3.2. Dispelling pathogenic factors and treating the symptoms – The major approach for addressing the manifestations

This targets pathological products such as blood stasis, fluid retention, and phlegm-turbidity.

3.2.1. Activating blood circulation and removing stasis – Applied throughout the entire course

- (1) Indications: Suitable for all HF patients presenting with manifestations of blood stasis, such as chest

tightness and pain, cyanotic lips and nails, dark purple tongue with petechiae and ecchymoses, and distended neck veins. Blood stasis syndrome runs through the entire course of HF; therefore, the method of activating blood circulation is applied throughout, which is consistent with the understanding of the pathogenesis of coronary heart disease^[9], making it particularly suitable for HF patients due to coronary heart disease.

- (2) Representative formulas: Xuefu Zhuyu Decoction and Taohong Siwu Decoction.
- (3) Commonly used herbs: *Salvia miltiorrhiza* (Danshen), *Ligusticum chuanxiong* (Chuanxiong), *Carthamus tinctorius* (Honghua), *Prunus persica* (Taoren), and *Angelica sinensis* (Danggui). For severe blood stasis, insect-based remedies such as *Hirudo* (Shuizhi, leech), *Pheretima* (Dilong, earthworm), and *Eupolyphaga* (Tubiechong, ground beetle) are skillfully employed to search out and dredge the collaterals.

3.2.2. Promoting diuresis and reducing edema – Addressing the main symptom

- (1) Indications: Suitable for HF patients with fluid retention manifestations such as edema, oliguria, ascites, and dyspnea preventing recumbency. This is an urgent measure for treating the symptoms and is key to symptom relief.
- (2) Representative formulas: Wuling San for unblocking Yang, transforming Qi, and promoting diuresis; and Wupi Yin for promoting diuresis and reducing edema.
- (3) Commonly used herbs: *Poria*, *Polyporus* (Zhuling), *Alisma* (Zexie), *Plantago* (Cheqianzi), and *Descurainia* (Tinglizi). Tinglizi drains the lung, relieves dyspnea, and promotes diuresis, and is an important herb in modern treatment of HF-related edema.

3.2.3. Draining the lung and relieving dyspnea – Primarily for acute conditions

- (1) Indications: Suitable for acute left-sided HF attacks, where fluid retention attacks the lung, manifesting as critical conditions such as wheezing, breathlessness, coughing up pink frothy sputum, and orthopnea. This therapeutic approach aligns with the views of Professor Xu Xinru, a nationally renowned senior TCM practitioner^[10-12].
- (2) Representative formula: Tingli Dazao Xiefei Decoction specifically drains fluid from the lung.
- (3) Commonly used herbs: Tinglizi, *Morus* (Sangbaipi), and *Armeniacae* (Xingren).

In clinical practice, the above therapeutic methods are often combined organically according to the needs of the condition, forming composite strategies with enhanced efficacy.

4. Dynamic syndrome differentiation and staged treatment

Acute exacerbation stage: The predominant pattern is “branch excess”, and treatment focuses on “draining the lung, promoting diuresis, activating blood, and removing stasis” to rapidly alleviate symptoms.

Stable remission stage: The predominant pattern is “root deficiency” or a mixture of deficiency and excess, and treatment focuses on “supplementing Qi and invigorating Yang / supplementing Qi and nourishing Yin, activating blood and removing stasis” to improve cardiac function and delay disease progression.

5. Holistic concept and regulating other Zangfu organs

Although the disease is located in the heart, HF is closely related to the kidney, spleen, lung, and liver^[13]. In treatment,

it is often necessary to warm kidney Yang to assist heart Yang, strengthen the spleen to eliminate the source of phlegm generation, drain the lung to relieve acute conditions, and soothe the liver to regulate Qi and blood.

6. Integration of Traditional Chinese and Western Medicine for complementary advantages

Emphasis is placed on combining TCM with standardized modern medical treatments, including diuretics, betablockers, sacubitril/valsartan, aldosterone receptor antagonists, SGLT2 inhibitors, and vericiguat^[1]. TCM has unique advantages in improving symptoms, enhancing quality of life, reducing rehospitalization rates, and regulating neuroendocrine functions.

The treatment of HF is a complete system with clear hierarchical levels, simultaneous attention to both root and branch, and dynamic adjustments. Its essence lies in accurate syndrome differentiation and flexible application of the two major strategies of “supporting the upright” and “dispelling the pathogenic”, through the combination of multiple therapeutic methods to achieve the goal of regulating overall body function and reversing pathological states.

In conclusion, the method of “supplementing Qi, invigorating Yang, draining the lung, and promoting diuresis” represents an academic thought in TCM that treats both the root and branch simultaneously, combining reinforcement and elimination. It precisely grasps the dynamic pathogenetic evolution of “deficient Yang – fluid retention – blood stasis” in HF. Particularly in managing acute critical conditions with fluid retention attacking the lung, through the combination of warming Yang to transform Qi and draining the lung to promote diuresis, it can effectively break the vicious cycle, relieve symptoms, and improve prognosis, fully demonstrating the multitarget integrative advantages of TCM in treating complex diseases.

7. Summary

Heart failure is an acute and critical illness in cardiology, characterized by complex pathogenesis and diverse complications. During the acute stage, integrated traditional Chinese and Western medicine is emphasized to stabilize the condition as soon as possible. At this stage, the predominant pattern is “branch excess”, and treatment focuses on “draining the lung, promoting diuresis, activating blood, and removing stasis” to rapidly alleviate symptoms. In the stable remission stage, the predominant pattern is “root deficiency” or a mixture of deficiency and excess, and treatment focuses on “supplementing Qi and invigorating Yang / supplementing Qi and nourishing Yin, activating blood and removing stasis” to improve cardiac function and delay disease progression.

8. Conclusion

The theory and practice of traditional Chinese medicine (TCM) in the prevention and treatment of heart failure (HF), after longterm development, have formed a complete understanding system with “root deficiency and branch excess” as the general outline and “Qi deficiency, blood stasis, and fluid retention” as the core pathogenesis. This system not only deeply grasps the dynamic process of disease development but has also achieved theoretical deepening and clinical innovation through continuous dialogue and integration with modern medicine. Currently, research in this field has made significant progress, and its value and potential are increasingly prominent.

From the perspective of clinical evidence, a large number of studies have consistently shown that, on the basis of standard Western medical treatment for HF, the addition of TCM (including classic formulas, proprietary Chinese medicines, and individualized decoctions) can further improve the patient's cardiac function classification, alleviate core symptoms such as palpitations, shortness of breath, and edema, and significantly enhance exercise tolerance and overall quality of life. Importantly, existing clinical observations suggest that this combined intervention regimen is welltolerated without increasing additional risks. This provides a solid practical basis for TCM as an important component of comprehensive HF management.

HF prevention is of paramount importance. The management of the cardiovascular continuum advocated in modern medicine is highly instructive. Early prevention and treatment of highrisk factors and related diseases can effectively reduce the occurrence and progression of HF. Throughout Professor Guo Shuwen's thoughts on the prevention and treatment of atherosclerosis, coronary heart disease, and HF, there is a striking similarity to the management of the cardiovascular continuum, reflecting many core TCM concepts such as "preventive treatment", "holistic concept", and "treating different diseases with the same method".

Future research still needs to seek breakthroughs in several key directions. First, clinical studies should move toward higher levels of evidence, with active design and implementation of largescale, multicenter, randomized doubleblind trials to generate more convincing highlevel evidence. Second, efforts should be made to explore a precision treatment model of "formulasymndrome correspondence". The dynamic evolution of TCM syndrome types in HF, and how to combine modern medical disease classification and staging with precise TCM syndrome differentiation to achieve individualized and optimized treatment, is a core issue for improving clinical efficacy. Finally, mechanism studies need to embrace complexity. TCM compound formulas are complex chemical systems acting on the human body as a complex, giant system. Future research should utilize cuttingedge technologies such as systems biology, network pharmacology, and metabolomics to elucidate the key pharmacodynamic material bases in compound formulas and the integrative effects of their interactions, constructing a complete network map of action from multiple levels of "organism–system–cell–molecule".

In summary, TCM demonstrates unique theoretical advantages and clinical value in the prevention and treatment of HF. The path forward lies in adhering to equal emphasis on TCM and Western medicine, taking clinical efficacy as the foundation, employing modern technology as a means, conducting indepth mechanistic studies on the treatment of HF by renowned senior TCM practitioners, and optimizing clinical protocols. By completing the modern transformation from "empirical inheritance" to "evidence support" and "mechanism elucidation", TCM will surely contribute more distinctive Chinese wisdom and solutions to the global prevention and treatment pattern of HF.

Funding

Guo Shuwen Studio, the Seventh Batch of National Project for Inheriting the Academic Experience of Veteran Traditional Chinese Medicine Experts (Project No.: National Traditional Chinese Medicine Personnel Education Letter [2022] No. 76); Beijing Xinhua Chuan Cheng "3+3" Guo Shuwen Grassroots Traditional Chinese Medicine Inheritance Studio (Project No.:Beijing Traditional Chinese Medicine Science Character [2023] No. 114); Fangshan District "Spring Seedling Top-notch Plan" Guo Shuwen Famous Traditional Chinese Medicine Inheritance Studio (Project No.:Jing Fang Wei [2021] No. 46)

Disclosure statement

The authors declare no conflict of interest.

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