

Enlightenment of the Yang-Qi Theory in the Canon of Medicine on Disease Treatment

Xinjie Ren¹, Feng Wang^{2,*}

¹Shaanxi University of Chinese Medicine, Xianyang 712046, Shaanxi, China

²Ankang Hospital of Chinese Medicine, Ankang 725000, Shaanxi, China

*Correspondence Author

Abstract: *As the foundational work of traditional Chinese medicine (TCM) theory, The Canon of Medicine attaches great importance to the significance of Yang-qi in human physiological activities. It elaborates on the crucial role of Yang-qi in human life activities from multiple dimensions including etiology and pathogenesis, and analyzes the impact of Yang-qi on the human body under pathological conditions. Thus, it provides a novel perspective from the Yang-qi perspective for analyzing the etiology, pathogenesis, evolution, and prognosis of diseases, as well as health preservation and care. Subsequent physicians, based on the Yang-qi theory expounded in The Canon of Medicine and the summary of clinical practical experience, gradually formed a comprehensive and systematic exposition of disease treatment from the Yang-qi perspective, and applied this to guide clinical practice and daily health preservation. By analyzing and studying the discussions in The Canon of Medicine on the role of Yang-qi deficiency or dysfunction in disease onset and evolution, this paper systematically summarizes the guiding effect of the Yang-qi theory on disease treatment and prognosis, and further generalizes the enlightenment of the Yang-qi theory on contemporary TCM disease treatment and the modern clinical application of Yang-warming methods.*

Keywords: The Canon of Medicine, Yang-qi Theory, Zang-Fu Organ Diseases, Meridian and Collateral Diseases of Limbs, Yang-warming Method.

1. Introduction

Traditional Chinese medicine (TCM) has formed a unique theoretical system based on the understanding of human life and diseases, among which the Yang-qi theory is a core component rooted in The Canon of Medicine—the cornerstone of TCM theoretical system. The Canon of Medicine analogizes Yang-qi to the sun in nature, emphasizing that it is the fundamental driving force for maintaining all human life activities [1]. Its normal circulation and functional exertion are essential for physical and mental health, while its deficiency, stagnation, or dysfunction is closely associated with the onset, development, and prognosis of various diseases.

For thousands of years, the Yang-qi theory in The Canon of Medicine has been continuously developed and enriched by subsequent physicians, who combined it with clinical practice to form a series of diagnostic and therapeutic doctrines such as the life gate theory and the Yang-supporting theory. These doctrines have been widely applied in the treatment of exogenous and endogenous diseases, and have important guiding significance for preventive treatment of diseases and health preservation in TCM. In modern TCM research, the Yang-qi theory is still a hot spot, and scholars have conducted in-depth explorations on its application in the treatment of cardiovascular diseases, pulmonary diseases, motor system diseases, and even tumors, achieving abundant research results.

This paper first expounds the connotation and clinical significance of Yang-qi as elaborated in The Canon of Medicine, including its physiological functions, the pathological mechanisms of disease caused by Yang-qi disorder, and its implications for health preservation and preventive treatment of diseases. Then, it summarizes the modern research achievements of the Yang-qi theory in the

treatment of various diseases, and finally points out the current research deficiencies and future research directions, aiming to further excavate the clinical value of the Yang-qi theory in The Canon of Medicine and provide a theoretical basis for contemporary TCM clinical practice.

2. The Exposition of Yang-qi in The Canon of Medicine

2.1 Physiological Significance of Yang-qi

Human beings are nourished by the qi of heaven and earth and shaped by the laws of the four seasons, and their life activities must conform to the laws of nature [1]. Suwen·Shengqi Tongtian Lun in The Canon of Medicine clearly states: “Yang-qi is to the human body what the sun is to heaven and earth. When it deviates from its proper position, it will shorten life and rob the body of vitality. Therefore, the movement of heaven relies on the brightness of the sun, and thus Yang-qi ascends and defends the exterior of the body.” This analogy fully reveals the core status of Yang-qi in human life activities.

Yang-qi is the driving force for maintaining the normal operation of the human body, which endows the human body with a positive and uplifting physical and mental state. Its continuous circulation and upward diffusion can warm the body, consolidate the body surface, and resist the invasion of external pathogenic factors. Only when Yang-qi exerts its physiological functions normally can the human body maintain a healthy state; once the circulation of Yang-qi is disordered or its function declines, the body’s resistance will decrease, the normal life activities will be affected, which may lead to reduced quality of life and even shortened lifespan [1]. In addition, The Canon of Medicine puts forward the classic view that “When Yang-qi is pure, it nourishes the spirit; when it is gentle, it nourishes the tendons”, indicating

that Yang-qi is not only the material basis for the movement of the body's muscles and tendons, but also the core support for the normal operation of the spirit.

2.2 Pathological Mechanisms of Yang-qi Disorder Inducing Diseases

The Canon of Medicine elaborates in detail the mechanism by which the interaction between external pathogenic factors and Yang-qi causes diseases. Different external pathogenic factors have different damaging effects on Yang-qi, leading to various clinical symptoms [1]. Pathogenic cold, a typical Yin pathogen, can bind the body surface, leading to the loss of warming and nourishing of the body surface and aversion to cold, and the stagnation of Yang-qi in the body further causes fever. Pathogenic dampness, also a Yin pathogen, is prone to injure Yang-qi and obstruct the flow of qi: it can trap the clear Yang-qi, making it unable to ascend to warm and nourish the head and face, resulting in heavy head and body and clouded consciousness; it can also hinder the outward diffusion of Yang-qi, leading to the failure of qi, blood and body fluids to reach the limbs, thus causing limited limb movement.

Yang-qi deficiency or dysfunction can also lead to mental disorders. Mild cases are manifested as lassitude and slow thinking, while severe cases can cause low spirits, depression, even listlessness and loss of consciousness [1]. In addition, The Canon of Medicine points out that Yang-qi deficiency is the internal cause of many internal diseases such as edema and abdominal masses. The statement that “The Yang-qi of the five Zang-organs is exhausted, body fluids overflow, and the physical form exists alone” directly reveals the pathogenesis of edema caused by Yang-qi deficiency: on the one hand, Yang-qi deficiency cannot restrain Yin and cold pathogens, leading to the overflow of water and dampness and accumulation between the skin and flesh; on the other hand, the deficiency of Zang-Fu Yang-qi weakens the functions of warming, promoting, transforming, defending and consolidating, resulting in poor water metabolism, further accumulation of water and dampness, and even the formation of phlegm-turbidity and blood stasis [1].

2.3 Implications of Yang-qi Theory for Health Preservation and Preventive Treatment of Diseases

The Canon of Medicine integrates the Yang-qi theory with the concept of “correspondence between human and nature”, and puts forward important health preservation and preventive treatment principles based on the waxing and waning of natural Yang-qi [1]. The principle of “nourishing Yang in spring and summer, nourishing Yin in autumn and winter” is the core summary of this concept: in spring and summer, natural Yang-qi germinates and flourishes, tending to ascend and spread outward, and human Yang-qi also follows the nature and tends to the body surface; therefore, nourishing Yang in spring and summer refers to warming and nourishing the internal Yang-qi to maintain the balance of Yin and Yang in the body.

On the basis of this principle, TCM further forms the strategy of “treating winter diseases in summer” [1]. In summer, with the abundant natural Yang-qi, it can assist in warming and nourishing human Yang-qi, eliminate internal pathogenic cold,

and remove pathological products such as phlegm-fluid and blood stasis caused by cold pathogens, so as to prevent the acute attack of winter diseases caused by Yang-qi deficiency and cold accumulation. This strategy embodies the TCM concept of preventive treatment of diseases, and is an important application of the Yang-qi theory in clinical practice.

2.4 Inheritance and Development of Yang-qi Theory by Subsequent Physicians

Inspired by The Canon of Medicine, subsequent physicians have conducted in-depth research on the Yang-qi theory and its clinical application, and achieved rich theoretical and practical results [1]. Synopsis of the Golden Chamber systematically classifies water-qi diseases such as edema, and divides diseases caused by disordered water metabolism into water, fluid and phlegm diseases, and further subdivides water-qi diseases and fluid diseases according to their etiology and pathogenesis. At the same time, it puts forward the general treatment principle of “For patients with phlegm-fluid retention, warm medicines should be used for regulation”, which is the direct inheritance and development of the Yang-qi theory in The Canon of Medicine.

Treatise on Cold Damage focuses on exogenous diseases and puts forward the theory that improper treatment can injure Yang-qi: sweating can injure heart Yang-qi, and improper purgation can injure spleen Yang-qi or middle Jiao Yang-qi [1]. This theory opens up a new thinking for diagnosing and treating diseases from the perspective of Zang-Fu Yang-qi damage. In addition, the Yang-qi theory in The Canon of Medicine has gradually developed into theoretical doctrines such as the life gate theory and the Yang-supporting theory, and has also indirectly influenced the warm disease theory—especially in the prognosis of warm diseases. Ye Tianshi's view that “nourishing Yin in febrile diseases is relatively easy, while unblocking Yang is the most difficult; nourishing Yin does not lie in tonifying blood, but in body fluids and sweat; unblocking Yang does not lie in warming, but in promoting urination” provides an important theoretical basis for the treatment of acute and critical diseases in the later stage of warm diseases [1].

3. Modern Research Achievements in Treating Diseases from the Yang-qi Perspective

3.1 Coronary Heart Disease Complicated with Anxiety and Depression

Coronary heart disease complicated with anxiety and depression is a common psychosomatic heart disease in modern clinical practice, and the Yang-qi theory is widely used in its syndrome differentiation and treatment [2]. Ma and Zhang pointed out that the root cause of the disease is heart Yang deficiency and lack of nourishment for the heart spirit, and the secondary causes are turbid qi attacking the heart, insufficient warming of the spleen earth, and the formation of phlegm-turbidity and blood stasis; the disturbing factors are hyperactivity of ministerial fire and reckless movement of Yin fire, which disrupt the mutual generation of water and fire and lead to heart dysfunction [2].

The treatment of this disease adheres to the principle of “consolidating the root and eliminating the pathogenic factors” [2]. The root treatment is to warm Yang and tonify the heart, calm the spirit and soothe the mood; the pathogenic factor treatment is to unblock Yang and resolve turbidity, eliminate phlegm and relieve bi-syndrome to halt disease progression; in addition, suppressing Yang and guiding it downward, leading fire back to its origin can prevent disease deterioration. In clinical practice, modified Guizhi Gancao Longgu Muli Decoction is commonly used for patients with heart Yang deficiency and heart spirit malnourishment; for patients with emotional disorders, acupuncture at Neiguan, Shenmen, Baihui and other acupoints is combined with warming Yang and unblocking collaterals, tonifying qi and blood to achieve the effect of treating both the body and the spirit; for patients with intermingled phlegm and blood stasis, Xuefu Zhuyu Decoction combined with Shiwei Wendan Decoction is used to move qi, resolve phlegm, activate blood circulation and calm the spirit [2].

Modern physicians’ self-formulated prescriptions such as Liqi Xiezhuo Decoction and Yangxin Anshen Decoction also show good curative effects in the treatment of this disease, which can not only improve the physical symptoms of anxiety and depression, but also alleviate chest tightness, palpitations and other symptoms of coronary heart disease, and the curative effect is superior to simple western medicine treatment [2]. Modified Qianyang Fengsui Dan can effectively improve chest pain and tightness in coronary heart disease patients, relieve palpitations caused by paroxysmal atrial fibrillation, and combined with conventional western medicine, it can significantly improve anxiety and depression emotions and reduce TCM syndrome scores [2].

3.2 Pulmonary Nodules

Based on the classic view of The Canon of Medicine that “Yang Transforms into Qi, Yin Forms into Substance”, modern scholars have explored the pathogenesis and treatment of pulmonary nodules, and formed a clear diagnostic and therapeutic thinking [3]. Liu et al. pointed out that the basic mechanism of pulmonary nodule formation is the insufficient transformation of qi by Yang and excessive formation of substance by Yin, with Yang-qi deficiency as the root cause and Yin transforming into toxin as the key factor for canceration [3]. From the perspective of modern medicine, cell execution, differentiation and apoptosis belong to the “Yang Transforms into Qi” function, while cell proliferation (the core of nodule formation) belongs to the “Yin Forms into Substance” function.

There are obvious differences in the pathogenesis of different types of pulmonary nodules [3]: for ground-glass nodules, the decline of Yang-qi is relatively slow, the main problem is the disorder of body fluid transportation, and the main pathological product is phlegm-dampness stagnation; for non-ground-glass nodules, the deficiency and decline of Yang-qi are more severe, the main problem is the disorder of both body fluid and blood circulation, and the main tangible pathogenic factor is the intermingling of phlegm and blood stasis. Yin transforming into toxin is the key to the canceration of pulmonary nodules: pathogenic factors stagnate and transform into fire and toxin, and the morbid

“Yang Transforms into Qi, Yin Forms into Substance” promotes the excessive growth of nodules; the pathological fire can carry pathogenic factors to invade the weak parts of the body, leading to nodule metastasis [3].

The treatment of pulmonary nodules is based on distinguishing benign and malignant nature [3]. For benign nodules, the treatment is divided into stages: tonifying the lung and spleen qi in the early stage, adding warming Yang and tonifying qi, activating blood circulation and resolving phlegm in the middle stage, and greatly tonifying the primordial qi in the later stage, assisted by insect-derived medicines to eliminate pathogenic factors and search collaterals. For malignant nodules, the priority is to clear away heat and detoxify to inhibit pathological Yang-qi, then a small amount of warming and unblocking, warming and tonifying herbs are added to eliminate pathogenic factors without injuring the healthy qi, and regulate the body’s Yang-qi transformation to dissipate Yin turbidity. *Prunella vulgaris*, *Rhizoma Curcumaeae*, *Hedyotis diffusa* and *Scutellaria barbata* are commonly used heat-clearing and detoxifying herbs [3].

3.3 Ptosis

Based on the view of The Canon of Medicine that “When Yang-qi is pure, it nourishes the spirit; when it is gentle, it nourishes the tendons”, modern scholars have clarified the pathogenesis of ptosis and formulated targeted acupuncture treatment plans [5]. Zhao and Zhai pointed out that Yang-qi is the material basis of the primordial spirit, the primordial spirit is the functional manifestation of Yang-qi, and the eyelid is governed by the primordial spirit, forming the “Yang-qi - primordial spirit - eyelid” axis [5]. At the same time, meridian tendons rely on the moistening of Yang-qi, and the normal movement of the eyelid’s muscles and tendons is based on the gentle and ascending of Yang-qi, forming the “Yang-qi - meridian tendons - eyelid” axis. The two axes jointly reveal that the deficiency or dysfunction of Yang-qi is the core pathogenesis of ptosis.

Tonifying Yang-qi is the key to the treatment of ptosis, and the general acupuncture treatment method is to unblock the governor vessel and regulate Yang-qi [5]. Baihui, Shangxing, Houxi, Fengchi and Shenting are the main acupoints selected, which can regulate the whole body’s Yang-qi, make Yang-qi ascend and moisten the eyelid’s muscles and tendons, and thus restore the normal opening and closing function of the eyelid.

3.4 Yin Syndrome of Three Yin Diseases in Treatise on Cold Damage

The recovery of Yang-qi and the transformation of Yin syndrome into Yang syndrome are important turning points in the treatment of Three Yin diseases in Treatise on Cold Damage, and modern scholars have in-depth studied its pathogenesis and clinical implications [4]. Liu and Li pointed out that the conditions for Yang-qi recovery and Yin syndrome transforming into Yang syndrome are closely related to three factors: the patient’s constitution and state (patients with strong constitution have healthy qi prevailing over pathogenic factors, and Yang-qi is easy to recover), the

intervention of medicines and food, and the physiological characteristics of Zang-Fu organs [4].

In the clinical treatment of Yin syndromes, it is necessary to follow the trend of Yang-qi recovery, but also to avoid excessive Yang-warming which may lead to excessive Yang recovery and transformation into fire pathogens [4]. When Yin syndrome patients show heat transformation manifestations such as facial acne, fever, sweating and warm hands and feet after warming treatment with stable pulse condition, it indicates a significant reactive response of the body, and timely medication is needed to assist Yang-qi recovery. During the pathogenesis transformation, the key treatment principle is to astringe Yang-qi: the recovered Yang-qi is the basis for disease self-healing, and it is strictly forbidden to use cold and cool herbs to clear and purge Yang-qi, which may lead to the recurrence of Yin syndrome [4].

3.5 Post-stroke Sleep Disorders

Yang-warming methods based on the Yang-qi theory have important clinical application value in the treatment of post-stroke sleep disorders [6]. Long and Xiao summarized the mechanism of Yang-qi in nourishing the spirit, and clarified that Yang-qi deficiency is an important cause of post-stroke sleep disorders, and the internal mechanism is reflected in six aspects [6]. Based on this, they put forward six corresponding Yang-warming methods, which target the different links of Yang-qi deficiency leading to sleep disorders, and achieve the purpose of regulating sleep by warming and tonifying Yang-qi, regulating the circulation of Yang-qi, and restoring the normal nourishing function of Yang-qi on the spirit [6].

4. Discussion and Conclusion

4.1 Research Summary

The Yang-qi theory in The Canon of Medicine is a core component of TCM theoretical system, which runs through the whole process of TCM's understanding of human life activities and disease occurrence and development. It takes "correspondence between human and nature" as the theoretical basis, regards Yang-qi as the fundamental driving force for maintaining human health, and clarifies the pathological mechanisms of various diseases caused by Yang-qi deficiency, stagnation and dysfunction. At the same time, it puts forward important health preservation and preventive treatment principles such as "nourishing Yang in spring and summer, nourishing Yin in autumn and winter" and "treating winter diseases in summer", which embody the TCM concept of "preventing disease before its onset".

In the long-term clinical practice, the Yang-qi theory has been continuously inherited and developed, and has formed a series of diagnostic and therapeutic doctrines and treatment methods. Modern TCM research has further excavated the clinical value of the Yang-qi theory, and its application scope has covered cardiovascular diseases, respiratory diseases, motor system diseases, neurological diseases and even tumors. A large number of studies have shown that the Yang-qi theory has important guiding significance for the syndrome

differentiation and treatment of these diseases, and the corresponding Yang-warming methods, prescriptions and acupuncture therapies have shown good clinical curative effects. Especially in the treatment of psychosomatic diseases such as coronary heart disease complicated with anxiety and depression, the Yang-qi theory emphasizes the simultaneous regulation of body and spirit, which is consistent with the modern medical concept of psychosomatic medicine.

4.2 Research Deficiencies

Although the modern research on the Yang-qi theory in The Canon of Medicine has achieved abundant results, there are still obvious deficiencies [1]. Current research mainly focuses on the relationship between Yang-qi deficiency/stagnation and the onset and development of diseases, and the involved diseases are mainly heart system diseases, tumors, insomnia and some meridian and collateral diseases of limbs. However, there are relatively few studies on the application of the Yang-qi theory in the treatment of metabolic diseases, such as diabetes, hyperlipidemia and obesity, which are common chronic diseases in modern society. In addition, most of the current studies are clinical observational studies, and the basic research on the modern biological mechanism of Yang-qi theory is relatively insufficient, which restricts the further integration and development of the Yang-qi theory with modern medicine.

4.3 Future Research Directions

In view of the current research deficiencies, the future research on the Yang-qi theory in The Canon of Medicine can focus on the following two aspects [1]: first, expand the research scope, and conduct in-depth explorations on the application of the Yang-qi theory in the treatment of metabolic diseases, clarify the pathogenesis of metabolic diseases from the Yang-qi perspective, and formulate targeted diagnostic and therapeutic plans; second, strengthen the basic research, combine modern molecular biology, immunology and other disciplines to explore the modern biological mechanism of Yang-qi, reveal the material basis of Yang-qi's physiological and pathological functions, and provide a scientific basis for the modernization of the Yang-qi theory.

5. Conclusion

In conclusion, the Yang-qi theory in The Canon of Medicine plays a pivotal guiding role in the diagnosis, treatment and prognosis of various diseases in TCM. It is an important theoretical treasure of TCM, and its clinical value is constantly verified and enriched in modern research. In the future, with the further excavation and research, the Yang-qi theory will play a more important role in contemporary TCM clinical practice and the prevention and treatment of chronic diseases, and make greater contributions to human health.

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