

# Based on the Theory of "Mutual Nourishment of Spleen and Kidney" to Discuss the Spleen and Kidney-TianGui-ChongRen-Uterus Menstrual Axis

Xiaoju Shui<sup>1,2,#</sup>, Bo Wei<sup>1,2</sup>, Shimei Li<sup>2,\*</sup>

1. Shaanxi University of Chinese Medicine, Xianyang, Shaanxi 712046;

2. Department of Traditional Chinese Medicine, Air Force 986 Hospital, Xi'an, Shaanxi 710054

Corresponding Author: Li Shimei, E-mail: 262420592@qq.com

## Abstract

Based on the theory of "mutual nourishment between the spleen and kidney," this paper explores the regulatory mechanisms of the spleen and kidney in the menstrual axis under Traditional Chinese Medicine (TCM) theory. It systematically discusses the core role of the Spleen and Kidney-Tian Gui-Chong Ren-Uterus axis in the physiology and pathology of female menstruation. By reviewing classical TCM literature and modern research findings, the paper argues for the synergistic regulation of the spleen and kidney on the production of Tian Gui (Gate of Life), the controlling and replenishment of Thoroughfare-Conception Vessels, and the storage and discharge functions of the uterus. Combining modern research on the neuro-endocrine reproductive axis, the paper elucidates the functional connections between the spleen-kidney theory and the hypothalamic-pituitary-ovarian (HPO) axis. It also summarizes the experiences of ancient and modern physicians in treating menstrual disorders from the perspective of the spleen and kidney, aiming to provide new insights for the exploration and application of the female menstrual axis in modern TCM and to offer references for the clinical diagnosis and treatment of menstrual disorders.

**Keywords:** Traditional Chinese Gynecology; Mutual Nourishment of Spleen and Kidney; Hypothalamus-Pituitary-Ovarian Axis (HPO); Spleen and Kidney-TianGui-ChongRen-Uterus Menstrual Axis; Menstrual Disorders.

Menstruation, as a periodic physiological phenomenon, has long been regarded as a barometer of female reproductive function. For a long time, TCM scholars have focused on the core reproductive axis of "Kidney-Tian Gui-Chong Ren-Uterus" when exploring strategies for the prevention and treatment of menstruation and related disorders. However, the theoretical connotation of this axis is far from exhaustive, especially regarding the interaction between the spleen and kidney and their influence on the menstrual cycle, which requires further exploration. This paper takes this as an opportunity to re-examine and construct a more comprehensive

theoretical system of the menstrual axis from the perspective of "mutual nourishment of Spleen and Kidney" aiming to provide new theoretical foundations and clinical strategies for the diagnosis and treatment of menstrual disorders.

## 1. The Origin and Development of the Kidney-Tian Gui-Chong Ren-Uterus Menstrual Axis

Basic Questions: Discourse on the Natural Truth of High Antiquity\* (Suwen: Shanggu Tianzhen Lun)[1], it is stated: "When a girl reaches the age of seven, the kidney qi is strong... At the age of fourteen, Tian Gui arrives, the Conception Vessel becomes unobstructed, and the Thoroughfare Vessel flourishes, menstruation comes at the right time, and thus she can have children... At the age of forty-nine, the Conception Vessel is weak, the Thoroughfare Vessel is weak, Tian Gui is exhausted, and the menstrual passage is blocked". This passage summarizes the relationship between kidney qi, Tian Gui, Thoroughfare-Conception Vessels, and menstruation, laying the foundation for the theory of the Kidney-Tian Gui-Chong Ren-Uterus reproductive axis. The kidney stores essence and governs reproduction, serving as the foundation of innate constitution; Tian Gui is the reproductive substance transformed from kidney essence; the Thoroughfare-Conception Vessels are the sea of qi and blood, and the uterus is the place where menstrual blood is stored and discharged. These four elements constitute the core axis of the generation and regulation of menstruation. Later physicians continuously explored and summarized the physiology of menstruation as a physiological phenomenon in which the viscera, meridians, and qi-blood work together on the uterus. However, this explanation lacks systematic and coherence. By the 1980s, Professor Luo Yuanqi, based on academic research and years of clinical experience, systematically proposed the close relationship between the kidney and female menstruation and pregnancy[2]. Professor Luo believed that the mechanism of the "kidney" in TCM is similar to the mechanism by which sex hormones regulate female reproductive function in modern medicine[3]. In 1983, Professor Yang Jialin[4] formally proposed the concept of the "Kidney-Tian Gui-Chong Ren-Uterus Axis," suggesting that the main axis of menstruation production is the kidney, Tian Gui, Thoroughfare-Conception Vessels, and the uterus. Since then, the "Kidney-Tian Gui-Chong Ren-Uterus Axis" has become the theoretical foundation of the mechanism of menstruation in TCM and has been included in TCM gynecology textbooks for widespread learning and inheritance. To this day, the clinical practice of TCM gynecology, including strategies for regulating menstruation, aiding conception, and stabilizing pregnancy, relies on the guidance of this theory. Based on this axis, contemporary physicians and scholars, combining clinical practice and modern medical have successively proposed theories such as the "Brain-Kidney-Chong Ren-Uterus"[5] and the "Heart (Brain)-Kidney-Uterus" reproductive axis[6], promoting the modernization of TCM menstrual theory. This paper, based on the theory of "mutual support between the spleen and kidney" and their relationship in the physiology and

pathology of menstruation, tentatively proposes the Spleen and Kidney-Tian Gui-Chong Ren-Uterus menstrual axis. Combining modern medical understanding of the neuro-endocrine system, it provides a multi-layered explanation for the regulation of the menstrual cycle, undoubtedly offering a richer theoretical basis for the integrated treatment of menstrual disorders in TCM and Western medicine. In the future, we expect further development of this theory, which will not only deepen our understanding of the physiology and pathology of menstruation but also open broader avenues for the prevention and treatment of menstrual disorders.

## 2.The Theoretical Origin of "Mutual Nourishment of Spleen and Kidney"

The character "互" is explained in the "Concise Ancient Chinese Dictionary" as "interacting". The "Practical Chinese Character Dictionary" defines it as "interacting". The character "互" indicates that the relationship between the spleen and the kidney is not unidirectional but bidirectional. The character "赞" is defined in the "Practical Ancient Chinese Dictionary" as "assisting" or "supporting". The "Practical Large Dictionary" defines it as "assisting" or "helping". The character "赞" points out that there is a supportive and collaborative relationship between the two[7]. The meaning of "mutual support between spleen and kidney" is a bidirectional influence relationship, including both physiological complement each other and pathological mutual exhaustion and mutual injury. In clinical treatment of spleen and kidney-related diseases, the relationship of mutual support and mutual prosperity should be considered.

As early as the pre-Qin and Han dynasties, the theoretical prototype of "mutual nourishment between the spleen and kidney" had already emerged. In Su Wen·Wu Zang Sheng Cheng chapter, it is stated: "The kidney is associated with bones, its flourishing is in the hair, and its master is the spleen." It shows that the kidney is restricted by the spleen, and the spleen is healthy and the kidney water can run normally. It is proposed in the book of Difficult Classic Forty-Two Difficulties that "the spleen governs the containment of blood and warms the five viscera", which echoes the warming function of kidney yang, initially constructing the theoretical framework of the spleen and kidney's collaborative regulation of the viscera.

By the Jin and Yuan dynasties, the theory of "mutual nourishment between the spleen and kidney" was described in the works of three of the four great physicians of the Jin and Yuan periods, and the theory gradually became systematized. Liu Wansu, Li Dongyuan, and Zhu Danxi all believed that the spleen and kidney are the foundation of human life, Only when the spleen and the kidney support each other and water and earth are in harmony can all things be generated[8]. Therefore, in Su Wen Xuan Ji Yuan Bing Shi·Huo Lei, it is stated: "Earth is the

mother of all things, water is the origin of all things, thus water and earth coexist below and are the foundation of all things. If the earth is dry and lacks the moistening nature of water, the foundation of all things will not be moistened, and the branches and leaves will wither." Li Dongyuan, in *Pi Wei Lun·Yin Yang Shou Yao Lun*, proposed: "The earth qi is the spleen and stomach of humans, the spleen governs the qi of the five zang-organs, the kidney governs the essence of the five zang-organs, and both of them jointly promote the rise of human essence and combine with the qi of nature"[9], thus "the two cooperate with each other to promote the generation and operation of qi and blood, and maintain the normal physiological function of the human body." Zhu Danxi believed that the foundation of human life is the mutual assistance of the spleen and kidney, stating in *Dan Xi Xin Fa·Juan San*: "People can maintain life, relying entirely on the function of the kidney and spleen "[10].

By the Ming and Qing dynasties, the theory has been highly mature and perfect. Zhang Jingyue, in *Jing Yue Quan Shu·Za Zheng Mo·Pi Wei*, pointed out: "The beginning of human life is based on the essence and blood; the continuation of human life depends on the nourishment of water and grain. Without essence and blood, there is no foundation for the form; without water and grain, there is no strength for the form. The governance of essence and blood lies in the gate of life, the governance of water and grain lies in the spleen and stomach..." This clarifies the mutual generation and promotion between the spleen and kidney. Based on this relationship, he believed that nurturing the acquired foundation, the spleen, can support the deficiencies of the congenital foundation, the kidney. It is proposed that "for those with innate deficiencies, the power of postnatal cultivation can compensate for the lack of innate endowment, and they can achieve more than half of the effect of replenishing heaven.[11]. Li Zhongzi, based on the discussions of the relationship between the spleen and kidney by various physicians since *Nei Jing*, highly summarized and further developed statement, proposing that "the kidney is the root of the innate constitution and the spleen is the root of the acquired constitution" systematically expounding on the synergistic role of the spleen and the kidney in life activities, and pointing out that they are "the foundation of human life" and have "mutually supportive functions". Thus, the theory of mutual support between the spleen and the kidney was born.

### **3.Theoretical Basis of the Spleen and Kidney-Tian Gui-Chong Ren-Uterus Axis**

#### **3.1 Theoretical Support for "Mutual Nourishment between the Spleen and Kidney"**

##### **3.1.1 The Spleen and Kidney as the Source of Menstrual**

Kidney essence can promote the maturation and secretion of the Tian Gui, stimulate the

prosperity of Thoroughfare-Conception Vessels, and thus regulate the cycle of the uterus to hide and excrete. As stated in *\*Basic Questions: Discourse on the Natural Truth of High Antiquity\** (Suwen: Shanggu Tianzhen Lun)[1] "When girls were seven years old, the kidney qi is strong... At fourteen years old, Tian Gui arrives, Conception Vessel becomes unobstructed, and the Thoroughfare Vessel flourishes, menstruation comes at the right time... At forty-nine years old, the Ren meridian is weak, the Thoroughfare Vessel is declining, Tian Gui is exhausted, and the menstrual cycle stops...", saying that the exhaustion of Tian Gui is controlled by the kidneys, and the onset and cessation of menstruation are regulated by Tian Gui. Li Zhongzi pointed out in "Medical Essentials" that "the root of the innate constitution lies in the kidney". The kidney stores essence and generates marrow, connects to the brain, secretes Tian Gui, is the foundation of Thoroughfare-Conception Vessels, and is the place where the uterus is attached. It governs growth and development, reproduction, and is the source of menstruation and life. The kidney plays a leading role in female physiological activities [12]. This view coincides with the neuroendocrine reproductive axis of modern medicine. "Medical Orthodoxy" states: "Menstruation is entirely dependent on the transformation of kidney water. When kidney water is deficient, the essence and blood will gradually dry up". The kidney stores essence, and essence and blood are mutually generated. When kidney essence is abundant, menstrual blood will be continuously produced, if the kidney essence deficiency, the menstrual blood will be dried up. However, the innate essence stored in the kidney is limited and must be supplemented and nourished by the essence generated by the spleen and stomach to continuously perform its functions of storing essence, secreting Tian Gui and controlling of reproductive activities. The spleen governs the blood, and when the temper is strong, it produces blood and makes the menstrual cycle regular. Enhancing the spleen is to enhance the source of blood and the function of it command blood, so that the blood sea is full and menstruation can be regular [13]. As stated in the book *The Four Sacred Hearts' Source*, "The source of the meridian water is transformed from the earth element." [14]. Spleen is the root of acquired, is the source of qi and blood, and is also the source of menstrual blood. On the other hand, the transformation function of the spleen must rely on the warming and steaming of kidney yang to function properly. Therefore, it is said that spleen yang is rooted in kidney yang. Zhao Xianke stated: "The fire of the stove originates from the Mingmen (Life Gate) and functions in the Middle Jiao (middle burner). This is referred to as the Middle Yang. When the Middle Yang is invigorated, it can digest food and transform it into qi and blood, providing nourishment...", "The innate vital energy can be transformed into the essence of water and grain." They all indicate that the spleen transportation of food nutrients is dependent on the vitality of the essence of the innate funding, that is, the spleen Yang's rise depends on the steam and warmth of the kidney Yang. Otherwise, as Tang Rongchuan said in "The Theory of Blood Disorders": "The spleen... without the fire of the Mingmen (Gate of Life) to generate earth, the earth will be cold and unable to transform..." .

In summary, both Tiangui which regulates the cessation of menstruation, and menstrual blood, are produced by the mutual nourishment of the spleen and kidney. If the function of mutual

reinforcement between the spleen and kidney is disorder, Tian Gui will be difficult to generate, essence and blood will be deficient, Thoroughfare-Conception Vessels will be deficient, and the sea of blood will not be able to overflow regularly, leading to low menstrual volume, menstrual disorder and even amenorrhea.

### **3.1.2 The Spleen and Kidney Jointly Govern the Thoroughfare-Conception Vessels**

The "Medical Source Theory" states: "The Thoroughfare-Conception Vessels both originate from the uterus, ascend along the back, and are the sea of the vessels. This is where blood is generated and where the embryo is attached." The Thoroughfare Vessel is the sea of blood, gathering the qi and blood of the twelve vessels; the Conception Vessel is the sea of yin vessels, regulating the yin qi and essence-blood throughout the body and connecting to the uterus. Thoroughfare-Conception Vessels originate from the uterus. Throughout history, medical experts have summarized their physiological functions in female reproduction as "the Thoroughfare Vessel is the sea of blood and the the Conception Vessel governing the fetus." Therefore, Thoroughfare-Conception Vessels are the pathways of menstrual blood. When the Conception Vessel is unobstructed and the Thoroughfare Vessel is full, the menstrual blood flows like the tide, arriving on time[15]. The "Jingyue Quanshu" states: "The Thoroughfare Vessel is the sea of blood, and all blood originates from nutrition of food, governed by the spleen and stomach." Thoroughfare-Conception Vessels rely on the qi and blood transformed by the spleen for nourishment. Only when the spleen qi is abundant can the "blood sea be full and menstruation occur at the right time." According to the "Suwen. Shanggu Tianzhen Lun," it is known that kidney essence generates Tian Gui, which directly regulates the Thoroughfare-Conception Vessels. When the kidney essence is abundant, Tian Gui arrives on time, activating the qi and blood circulation of the Thoroughfare-Conception Vessels. Moreover, the spleen governs blood, preventing it from flowing erratically; the kidney governs storage and retention, controlling the Thoroughfare-Conception Vessels to prevent blood from flowing at the wrong time. The two work together to ensure that the storage and release of menstrual blood are regulated, and the menstrual cycle is regular. If the spleen and kidney are weak, the Thoroughfare-Conception Vessels will be undernourished; if the spleen and kidney are not solid, the Thoroughfare-Conception Vessels will be uncontrolled, ultimately leading to menstrual physiological disorders.

## **3.2 Modern Research on the Spleen and Kidney in Relation to the Nervous, Endocrine-Reproductive System**

Modern medicine believes that the regulation of the menstrual cycle mainly depends on the hypothalamic-pituitary-ovarian axis, that is, the nervous, endocrine-reproductive system. The research on the correlation between the "spleen and kidney" in traditional Chinese medicine and the nervous, endocrine-reproductive axis provides a more microscopic theoretical basis for the

"kidney and spleen-Tian Gui-Chong Ren meridians-uterus menstrual axis."

TCM believes that kidney essence is the foundation of life and reproduction, secreting Tian Gui to promote the growth, development, and reproduction of the body. Combining this with the neuro-endocrine-reproductive axis in modern medicine, it can be considered that the various hormones secreted by the gonads can be seen as part of the material basis of kidney essence (i.e., Tian Gui). The reproductive function of the kidney is closely related to the regulatory role of the hypothalamus on the gonadal axis[16]. Zhang Cuomei et al.[17] investigated and analyzed the TCM syndrome types and changes in sex hormone levels in 106 patients with ovulation dysfunction infertility and found that patients with kidney deficiency had significantly elevated FSH and decreased E2. Li Weihong [18] et al. found in a study on the correlation between serum sex hormone levels and TCM syndrome types in 532 patients with dysfunctional uterine bleeding that kidney deficiency syndrome was positively correlated with FSH, and spleen-kidney deficiency syndrome was positively correlated with LH. FSH mainly promotes the development and maturation of follicles and the secretion of estrogen, while LH promotes ovulation and the formation of the corpus luteum, which is similar to the stimulating and warming effect of "yang qi" in traditional Chinese medicine. It can be seen that insufficient kidney essence and spleen-kidney yang deficiency may lead to dysfunction of the hypothalamic-pituitary-ovarian axis, thereby causing disorders in sex hormones and resulting in abnormal menstruation and ovulation. In recent years, a large number of studies [19-21] have shown that "spleen deficiency and kidney deficiency" in traditional Chinese medicine are closely related to intestinal flora imbalance. Some studies[22] have found that intestinal flora imbalance may lead to the persistence of chronic inflammatory reactions and abnormal glucose and lipid metabolism, causing the occurrence and development of insulin resistance, and further leading to abnormal follicle development and hyperandrogenemia. Scholar Zhong Jiawen [23] et al. found that after intragastric administration of Liuwei Dihuang Pills to a mouse model of premature ovarian failure for 28 days, compared with the control group, the beneficial bacteria in the intestinal flora of the mice treated with Liuwei Dihuang Pills increased, the harmful bacteria decreased, and the expression of anti-mullerian hormone hormone and estradiol in the serum significantly increased, while FSH significantly decreased. These results indicate that Liuwei Dihuang Pills can improve the intestinal microecology of mice, maintain its balance, help reduce the oxidative stress level of the body, and thereby protect the ovaries and improve ovarian function. Additionally, spleen deficiency can also affect the levels of leptin and insulin-like growth factor-1 (IGF-1) in the body, interfere with hypothalamic energy metabolism, and lead to HPO axis disorders [24]. Modern pharmacological research has found that traditional Chinese medicines that tonify the kidney and spleen have endocrine hormone-like effects and can regulate the hypothalamic-pituitary-ovarian axis function[25].The extracts of the Chinese herbs Epimedium, Dodder seed, and mulberry can restore the GnRH secretion rhythm by activating the PI3K/Akt/mTOR, Wnt/ $\beta$ -catenin, etc. signaling pathways, regulate the secretion and synthesis of follicle-stimulating hormone (FSH) and luteinizing hormone (LH), and thereby restore ovarian function [26-28]. Zhang Yujie [29] et

al. found through animal experiments that the spleen-tonifying formula - Invigorating Spleen Formula can down-regulate the expression of autophagy-related proteins Beclin-1 and LC3A/B through the AMH/AMHR II signaling pathway, inhibit excessive autophagy of ovarian granulosa cells, improve the ovarian morphology of POS rats, and thereby improve their sex hormone levels and ovarian function.

In summary, numerous studies in recent years have shown that the functions of the spleen and kidney in traditional Chinese medicine have multiple intersections with the neuroendocrine regulatory mechanism in modern medicine. These research results provide modern medical evidence for the theoretical system of the

Spleen and Kidney-TianGui-ChongRen-Uterus menstrual axis.

### **3.3 Ancient and Modern Physicians' Experience in Treating Menstrual Disorders from the Perspective of the Spleen and Kidney**

From ancient times to the present, physicians have often focused on the spleen and spleen-kidney when treating menstrual disorders, flexibly applying traditional Chinese medicine theories and accumulating rich clinical experience and profound academic insights.

Fu Shan, a famous medical scientist in the Ming and Qing dynasties, had unique insights in the diagnosis and treatment of female diseases. He abandoned the mainstream view of "the liver and kidney are innate for women", and innovative put forward the treatment concept of paying equal attention to the spleen and kidney, paying special attention to the treatment of the spleen and stomach. Nourish the congenital with the acquired, and treat the acquired to regulate the congenital [30]. Such as in the seed of Fu Qingzhu Nuke, for women eat less infertility, He thinks this is because the kidney fire failure can not warm spleen soil, spleen soil lost in warm, the uterus can not be nourished by qi and blood, and choose Warm earth Yulin soup to treatment. In the prescription, Atractylodes rhizoma, ginseng, Huai yam and Shenqu are used to warm the spleen and stomach, Euphorbidium, raspberry and the fire of the heart and pericardium. This idea of balancing the spleen and stomach and kidney highlights the core position of the spleen and kidney in menstrual regulation.

The Ming Dynasty physician Zhang Jingyue[31] stated, "If there is a collapse of the middle qi and a lack of consolidation at the gates, leading to reckless movement, this can also occur. This is due to the deficiency of the spleen and kidney, and it cannot be entirely attributed to fire." Furthermore, he emphasized that "The key to regulating menstruation lies in tonifying the spleen and stomach to provide the source of blood, and nourishing the kidney qi to stabilize the blood chamber."

He believed that the mutual coordination between the spleen and kidney is crucial for maintaining a stable menstrual cycle. In treating conditions such as metrorrhagia, threatened



abortion, and postpartum abdominal pain in women, he often used prescriptions like Liyin Decoction, Shoupi Decoction, and Guipi Decoction to warm and tonify the spleen and kidney and replenish reproduction's sources.

Professor Lu Zhizheng, a master of traditional Chinese medicine [32], holds that a healthy spleen and stomach leads to the Conception Vessel becomes unobstructed, and the Thoroughfare Vessel flourishes, resulting in a full Blood Sea and regular menstruation. In the treatment of gynecological diseases caused by dysfunction of the spleen and stomach, the following approaches can be adopted: 1. Emphasizing the regulation of the spleen and stomach based on the principle of "holding the center and moving the periphery"; 2. Regulating the liver and spleen together to harmonize the emotions and adjust the ascending and descending movements; 3. Paying attention to both the kidney and spleen; 4. Adjusting through dietary and lifestyle modifications.

Professor Yu Jin, an expert in reproductive medicine combining traditional and Western medicine [33], believes that spleen deficiency with phlegm-dampness and kidney deficiency with blood stasis are the main causes of ovulation disorders in polycystic ovary syndrome (PCOS). In treating this condition, she advocates "tonifying the spleen to remove dampness and warming the kidney to resolve blood stasis," such as her self-developed formula for promoting ovulation and regulating menstruation: cinnabar stone and epimedium to warm the kidney, and codonopsis and poria to tonify the spleen, to promote ovulation and improve the receptivity of the endometrium.

Professor You Zhaoling, a renowned gynecological expert [34], places great emphasis on the spleen and kidney when treating female infertility, irregular menstruation, and other conditions. She developed the academic idea of "nourishing the follicles by warming the ovaries," using codonopsis, astragalus, and atractylodes to tonify the spleen and warm the ovaries; and using cistanche, morinda, and raspberry to tonify the kidney and warm the ovaries, achieving a dual tonification of the spleen and kidney to promote follicular growth, development, and ovulation, thereby restoring ovarian function.

In summary, whether it is menstrual disorders or other gynecological diseases based on menstrual irregularities, many ancient and modern medical experts have treated them by focusing on the spleen and spleen-kidney. This not only demonstrates the significant role of the spleen and spleen-kidney in the treatment of menstrual disorders but also largely validates the scientific nature of the Spleen and Kidney-TianGui-ChongRen-Uterus Menstrual Axis

## 4. Conclusion

Based on an in-depth exploration of the "mutual support of the spleen and kidney" theory and

in combination with the modern medical neuro-endocrine reproductive system, this article proposes to incorporate the spleen and kidney as the main components of the female menstrual axis, which is "spleen and kidney - Tian Gui - ChongRen meridians - uterine axis." This axis is dominated by the spleen and kidney, with the mutual support of the innate and acquired aspects, generating Tian Gui and essence-blood, regulating the Thoroughfare-Conception Vessels, and coordinating the regularity of menstruation.

The construction of this menstrual axis theory system has expanded new research directions for the theoretical framework of traditional Chinese gynecology. Future research should deepen the exploration of the microscopic mechanisms of the spleen and kidney in menstrual physiology and the correlation between the traditional Chinese reproductive axis and the modern neuro-endocrine reproductive axis, strengthen the integration of traditional and Western medicine, and promote the modernization of traditional Chinese gynecology.

## References

- [1] Huang Di Nei Jing • Su Wen [M]. Tian Daihua,clear up. Beijing: People's Medical Publishing House, 2017.
- [2] Luo Yuankai. The Application of Regulating Kidney Yin and Kidney Yang in Gynecological Diseases [J]. New Chinese Medicine, 1974, 6(1):8.
- [3] Luo Yuankai. Luo Yuankai's Medical Collection [M]. Beijing: People's Medical Publishing House, 1990.
- [4] Yang Jialin. The Key Link in Menstrual Production - The Kidney-Tian Gui-Chong Ren-Uterus Axis [J]. Sichuan Chinese Medicine, 1983, 1(2):14-16.
- [5] Zhang Yuzhen. Chinese Gynecology [M]. Beijing: China Press of Traditional Chinese Medicine, 2002:19.
- [6] Xia Guicheng. Xia Guicheng's Practical Chinese Gynecology [M]. Beijing: China Press of Traditional Chinese Medicine, 2009:4-6.
- [7] Peng Cheng, Liu Fangyuan, Shen Ying, et al. A Glimpse into the Theory of "Mutual Reinforcement between the Spleen and Kidney" in the Treatment of Gynecological Tumors [J]. Liaoning Journal of Traditional Chinese Medicine, 2022, 49(08):45-48. DOI:10.13192/j.issn.1000-1719.2022.08.013.
- [8] Sun Haixia. The Theoretical Origin of "Mutual Reinforcement between the Spleen and Kidney" and Its Influence on Later Generations [J]. Journal of Shanxi College of Traditional Chinese Medicine, 2007, 8(3):14-15.
- [9] Li Dongyuan. Pi Wei Lun [M]. Wen Kui, Ding Guohua,clear up. Beijing: People's Medical

Publishing House, 1957:4,37.

- [10] Tian Sisheng. Zhu Danxi's Complete Medical Works [M]. Beijing: China Press of Traditional Chinese Medicine, 2006:140.
- [11] Sun Haixia. The Theoretical Origin of "Mutual Reinforcement between the Spleen and Kidney" and Its Influence on Later Generations [J]. Journal of Shanxi College of Traditional Chinese Medicine, 2007, (03):14-15.
- [12] Zeng Qian. Professor Yang Jialin's Experience in Treating Gynecological Diseases from the Perspective of the Liver and Kidney [J]. Chinese Journal of Emergency Medicine, 2005, 14(6):552-553.
- [13] Tan Zhongle, Lei Lei. Discussion on the Treatment of Leukorrhea from the Perspective of the Spleen, Liver, and Kidney in Fu Qing Zhu Nu Ke [J]. Journal of Changchun University of Chinese Medicine, 2010, 26(5):797.
- [14] Huang Yuanyu. Huang Yuanyu's Medical Essence • Si Sheng Xin Yuan [M]. Beijing: China Press of Traditional Chinese Medicine, 2014.
- [15] Based on the "Pivot Movement" to Analyze the "Spleen-Liver-Chong Ren-Uterus Menstrual Axis" Xu Yun, Wang Suli, Li Shimei 0253-9802.2022.12.005.
- [16] Zhang Yu. A Brief Discussion on the Relationship between Kidney Governing Reproduction and Female Reproductive Endocrinology [J]. Gansu Journal of Traditional Chinese Medicine, 2002, (03):59-60.
- [17] Zhang Cuimei. A Study on the Distribution of TCM Syndromes and the Correlation with Sex Hormones in Patients with Ovulatory Dysfunction Infertility [D]. Fujian University of Traditional Chinese Medicine, 2011.
- [18] Li Weihong, Li Wenjie, Xue Yan. A Study on the Correlation between TCM Syndromes and Serum Hormone Levels in Patients with Dysfunctional Uterine Bleeding [J]. Chinese Journal of Integrated Traditional and Western Medicine, 2016, 36(09):1061-1064.
- [19] Ding Weijun, Gao Feng, Yang Jie, et al. A Clinical Study on the Imbalance of Intestinal Flora in Patients with Kidney Yang Deficiency Syndrome [J]. New Chinese Medicine, 2007(1):9-10.
- [20] RIVIR A, SELAK M, LANTIN D, et al. Bifido Bacteria and Butyrate-Producing Colon Bacteria: Importance and Strategies for Their Stimulation in the Human Gut [J]. Front Microbiol, 2016, 7:797.
- [21] Dong Kaizhong, Gao Yongsheng, Qin Ning'enjia, et al. The Effect of Shen Ling Bai Zhu San on Mice with Intestinal Flora Imbalance Caused by Antibiotics [J]. Chinese Journal of Experimental Traditional Medical Formulae, 2015, 21(1):154-157.
- [22] Sv LYNCH, O PEDERSEN. The Human Intestinal Microbiome in Health and Disease [J]. New Engl J Med, 2016, 375(24):2369-2379.

- [23] Zhong Jiawen, Jiang Bo, Zhang Wenyan, et al. Liu Wei Di Huang Wan Regulates Intestinal Microbiome Balance to Inhibit Oxidative Stress in Ovarian Failure Mice [J]. Chinese Journal of Tissue Engineering Research, 2025, 29(11):2285-2293.
- [24] Zhang Aomen. Clinical Observation of Shen Zhu Tiao Pi Granules in Treating Lean Type 2 Diabetes with Spleen Qi Deficiency Syndrome [D]. Anhui University of Chinese Medicine, 2024. DOI:10.26922/d.cnki.ganzc.2024.000330.
- [25] Xu Huimin, Sun Kefeng, Li Chuling. Research Progress on TCM Regulation of Endoplasmic Reticulum Stress in the Treatment of Polycystic Ovary Syndrome [J/OL]. Journal of Liaoning University of Traditional Chinese Medicine, 1-15[2025-02-27].
- [26] Cai Lirong, Li Dajin, Sun Xiaoxi, et al. A Study on the Preventive and Therapeutic Effects of Bu Shen Huo Xue Fang on Experimental Ovarian Failure in Mice [J]. Chinese Journal of Integrated Traditional and Western Medicine, 2001, 21(2):126-129.
- [27] Dong Ruoxi, Zhu Xiaodan, Fan Bozhen, et al. The Effect of Icaritin on Ovarian Reserve Function in Cisplatin-Induced Ovarian Failure Rats [J]. Zhejiang Medical Journal, 2019, 41(3):230-233.
- [28] Huang Changsheng, He Shoudi, Guan Yancheng, et al. The Effect of Cuscuta Flavonoids and Quercetin on Ovarian Function in Tripterygium Glycosides-Induced Ovarian Failure Rats [J]. Chinese Journal of Clinical Pharmacology, 2020, 36(6):667-670.
- [29] Zhang Yujie, Wang Yingxin, Zhang Ning. Exploration of Qi Gong Wan Fang Regulating Granulosa Cell Autophagy in PCOS Phlegm-Dampness Syndrome Model Rats Based on the AMH/AMHR II Pathway [J]. Lishizhen Medicine and Materia Medica Research, 2024, 35(15):3370-3376.
- [30] Nan Nan, Du Xiaoli. The Academic Thought of Treating Gynecological Diseases from the Perspective of the Spleen and Stomach in Fu Qing Zhu Nu Ke [J]. Hebei Journal of Traditional Chinese Medicine, 2024, 46(01):142-145.
- [31] Long Bingxi. On Zhang Jingyue's Emphasis on the Spleen and Kidney [J]. Hubei Journal of Traditional Chinese Medicine, 2003, (03):3-4.
- [32] Zhao Ruihua. The Application of Lu Zhizheng's Spleen and Stomach Theory in Gynecology Clinical Practice [J]. Journal of Traditional Chinese Medicine, 2021, 62(16):1455-14.
- [33] Peng Cheng, Liu Fangyuan, Shen Ying, et al. A Glimpse into the Theory of "Mutual Reinforcement between the Spleen and Kidney" in the Treatment of Gynecological Tumors [J]. Liaoning Journal of Traditional Chinese Medicine, 2022, 49(08):45-48. DOI:10.13192/j.issn.1000-1719.2022.08.013.
- [34] Liu Wen'e, Tan Zhenyu, Chen Yanxia, et al. You Zhaoling's "Warming the Ovaries to Nourish the Follicles" Treatment Approach and Application [J]. Journal of Traditional Chinese Medicine, 2014, 55(20):1726-1728. DOI:10.13288/j.11-2166/r.2014.20.005.