# Six Methods to Treat Renal Edema in Chinese Medicine

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Abstract: Edema is one of the typical symptoms of renal diseases in clinical practice, and the effective treatment of nephrogenic edema in Chinese medicine can be achieved. In this paper, we believe that the evidence of nephrogenic edema is a deficiency of the root cause and a deficiency of the lung, spleen and kidney as the pathogenesis. From the perspective of the combination of staging and classification, and the combination of strengthening the body and eliminating pathogens, it can be concluded that ① lift the pot and lift the lid, soothe the lungs and benefit water, ② remove the herbs, promote blood circulation and promote water, ③ nourish the spleen and strengthen the movement, warm the yang and benefit the water, ④ the spleen and kidney Shuangnuan, transforming qi and promoting water, ⑤ soothing the liver and reducing swelling, reconciling Shaoyang, ⑥ nourishing qi and nourishing blood, and diuretic and reducing swelling, in order to improve the theoretical support of traditional Chinese medicine for the treatment of renal edema.

Keywords: Nephrogenic Edema, Identification and Treatment, Review

Edema is one of the common clinical signs, especially nephrogenic edema. Nephrogenic edema is a type of condition in which the body retains water and overflows the skin due to kidney dysfunction caused by various reasons. The first occurrence is at the site of tissue laxity, mostly from the top down. It belongs to the category of "water qi disease" and "yin water and yang water" in Chinese medicine[1]. At present, the clinical treatment of nephrogenic edema is mainly based on diuretics, sodium restriction and plasma protein supplementation, but the side effects of western drugs are large and can cause disruption of the "neuro-endocrine regulatory axis"[2], and it is stubborn and recurrent and difficult to be cured. Chinese medicine treatment can combine disease identification and evidence identification from multiple targets and organs, which can better regulate the overall mechanism of the patient, not only improve the clinical symptoms, but also ultimately achieve the goal of treating both the symptoms and the root cause.

### 1. History of Edema

Traditional Chinese medicine has known edema for a long time, the term edema was first seen in the Suwen - water heat point theory: "water disease, the lower for puffy large abdomen, on the wheezing, can not sleep, the symptoms of both diseases, so the lungs for wheezing, the kidneys for edema, the lungs for the reverse can not sleep." It is written in the Spiritual Pivot - Water Distension: "The water begins to rise also,..... to hand press its belly, with the hand and rise, such as wrapped in water, this its Hou also." The above suggests that the site of edema is in the kidney, associated with the lungs, and describes the symptoms of edema disease. In the Su Wen - Tang Liquid and Mash Li Theory, it was first proposed that "open the door of ghosts and cleanse the house", and that "pacify the power and balance, remove Wan Chen's straw, slightly move the four extremities, warm the clothes, and mu stab its place to restore its shape", and other two later classical treatment rules of sweating and urination. Later medical practitioner Zhang Zhongjing in the "Jin Kui Essentials - Water-Qi Disease Pulse and Treatment" divided water qi disease into five types, "the disease has Feng Shui, Pi Shui, Zheng Shui, Shi Shui, and Yellow Sweat", and proposed corresponding prescriptions for the treatment of edema according to different diseases and disease mechanisms. With the further development of Chinese medicine in modern times, Zhu Danxi in the Yuan Dynasty pioneered the treatment from yin and yang in his "Danxi Xinfa", dividing edema into yin and yang water. In the Ming and Qing dynasties, the etiology and treatment of edema were further refined.

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#### 2. Pathogenesis

In the course of chronic nephritis, edema, hematuria, proteinuria, and hypertension are typical clinical features, while edema is the most common symptom of the disease, which can occur repeatedly at different stages of the disease and in different locations. The etiology of the disease is complex, and the external causes are mostly due to external wind, water and dampness, and internal toxins, while the internal causes are mostly due to blood stasis and emotional and mental injuries, and often develop under the combined effect of multiple factors[3]. The pathogenesis is mostly due to the loss of lung regulation, spleen transfer, kidney opening and closing, and unfavorable qi-transformation of the three jiao, but its origin lies in the kidney and pathological changes in the renal parenchyma[4]. The "Zhongzangjing" cloud: "people in a hundred diseases, difficult to treat, there is nothing more than water, water, the kidney system, the kidney, the people of this also, the kidney is strong, the water also in the sea, kidney deficiency, the water scattered in the skin." In Jing Yue Quan Shu, it is said that "where edema is a disease, it is a disease of the lungs, spleen, and kidneys, and the three organs are interrelated. The "Treatise on the Origin of the Diseases - The Causes of Oedema" says: "The kidney is the master of water." The Law of Medical Doctors - Edema Theory: "Kidney Qi from Yang is open, from Yin is closed, water does not pass and is swollen." Both indicate that the appearance of nephrogenic edema is closely related to the imbalance of yin and yang in the kidney itself and the inability of yang deficiency to control water. Kidney for disease, the kidney main water dysfunction, there is no treatment of water and swelling, kidney deficiency urinary absorption excretion uptake no power, long then the kidney Yang deficiency loss, can not warm the internal organs, followed by deficiency of the lungs and spleen. In this paper, we explore the treatment of nephrogenic edema from the perspective of combining staging and typing, and combining support for the positive and elimination of the evil, using theory and method to dispatch prescriptions, and exploring the six methods of treating nephrogenic edema.

#### 3. Identification and Treatment

#### 3.1 Lift the Pot and Uncover the Lid to Promote Lung and Water

The method of lifting the pot to uncover the lid first appeared in the medical case of Zhu Danxi, a famous Jin Yuan doctor, "Ancient and Modern Medical Case - Volume 6"[5]recorded: "One person urine is not working ..... this accumulation of phlegm in the lungs, the lungs for the upper jiao, the bladder for the lower jiao, the upper jiao closed the lower jiao plug. As the drip of the vessel must be the upper orifice through and then the lower orifice of the water out. Take the medicine to vomit greatly, the disease as lost." It mainly targets the pulmonary qi stagnation type of renal edema. The kidney is the main source of water and is the root of water. If the kidney is deficient, the bladder is not conducive to gasification, and the lung is the source of water, so it cannot regulate the water channel. For exampleProfessor He Zeyun[6]proposed that the lung and kidney meridians are interconnected and share the metabolism of water and fluid, and concluded that The clinical use of ephedra, almond, chrysanthemum, mulberry leaf, and orris, which belong to the lung meridian, is light and pungent, warm or cold in nature, to promote the lung qi and regulate the qi flow, so that the water-dampness evil will come out from the stool and the swelling will disappear. Jin Feng[7].He used the analogical thinking of the elephant and used the products that promote the lung, such as Zizi Zi, Fang Feng and Ephedra, to connect the inside and outside and regulate the top and bottom, so that the water evil can reach the skin and hair outside and the lower orifices inside and be resolved. Emphasize that the dosage of medication should be determined according to the patient's constitution and the progress of the disease, and do not sweat blindly to avoid depletion of fluids and fear of injuring the righteousness. Zhao Yuyong[8].It is believed that while promoting the flow of water from the lung, the use of heat-clearing and detoxifying products should be added to regulate the function of the lung, and clinically, it is preferred to use Yuejianjiajutang combined with Yinxiao San, and in cases of severe sore throat, Jin Yinhua, Scutellaria and Lianxiao are used, which can effectively reduce recurrence.

#### 3.2 remove Wan Chen Stagnant, Invigorate Blood and Promote Water

In patients with chronic nephritis, the disease is prolonged, the kidney meridian is deficient, blood stasis is blocked, and blood stasis is both the cause and the pathological product of the disease. Wang Yongjun[9], a nationally renowned Chinese medicine practitioner, believed that stasis of blood plays an important role in the development of nephrogenic edema. With the help of modern laboratory

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indicators, such as coagulation, platelet function, and histological examination of renal pathology, numerous microscopic evidence of nephrogenic edema with stasis of blood was found, which can be called "potential evidence of stasis of blood". ThereforeWe take care of the symptoms as well as the root cause. It is especially important for patients with advanced kidney disease. This method is based on the principle that "blood is water when it is not favorable" and that "stasis of blood turns into water, which also causes edema. Blood stasis turns into water, and edema also occurs, which is a blood disease and also water", "The treatment is based on the principles of "the Blood is not conducive to water", "the stagnant Blood turns into water and also causes edema. This method is based on the evidence of "Blood is not good for water". Using the method of activating blood circulation, removing blood stasis and promoting water retention, we seek to improve the blood supply to the kidneys, thereby eliminating edema. Jing Yue Quan Shu-Edema says: "The treatment of water should be accompanied by the management of qi; the treatment of qi should also be accompanied by water, so that the water and qi are also line"[10]. National Medical Master Zhang Xuewen[11]. It is believed that Qi and Blood have an interdependent relationship, if Qi is purely regulated, the tangible evil cannot be removed, and the body's essence and Qi and Blood cannot reach the internal organs and limbs, while at the same time regulating Qi and dispelling blood stasis and water often gets twice the result with half the effort, which means that it can be divided and drained. Blood Mansions and Blood Stasis Soup is a formula commonly used by Zhang for treating renal edema with qi stagnation and blood stasis, using Fu Ling, Chuan Xiong, Tao Ren and Angelica Sinensis to move qi and remove blood stasis and promote water retention. Professor Wu Kangheng[12]concluded that nephrogenic edema is often caused by the interconnection of phlegm and stasis. The symptoms include recurrent edema, stubborn and difficult to disappear, dull complexion, fixed back pain, dull tongue or stasis, and astringent and unfavorable pulse. Prof. Xiaojun Fu[13]. In the course of long-term practice of kidney disease, the clinical efficacy of patients with refractory renal edema, together with worm medicines, is remarkable. Such as commonly used cat's eye herb, motherwort target medicine to strengthen the blood circulation, blood circulation and water circulation. And after years of clinical practice, summed up into an experienced formula astragalus leech medicine pair. Hemodynamic studies in modern medicine also provide a microscopic basis for the diagnosis and treatment of TCM, but it has been suggested that the viscosity of blood is reduced in the late uremic stage of nephritis[14]. The possibility of using blood activation and stasis removal methods at this stage still needs to be further explored.

## 3.3 Nourishing the Spleen, Tonifying the Spleen, Warming the Yang and Promoting Water Circulation

Clinically, it is mostly seen in patients with early stage and milder forms of chronic nephritis. Su Wen- to the true to the greatsaid: "all dampness swelling full, all belong to the spleen." If the spleen and Yang are not revitalized, the middle jiao loses its function and water is not controlled, then water-dampness overflows in the skin or stops inside. Patients with swelling, lack of warmth in the extremities, fear of cold and preference for warmth, abdominal distension and loose stools, and a sluggish mouth are all symptoms of Spleen-Yang deficiency. Due to the weakness of the spleen and Yang and the internal growth of dampness, the source of biochemistry is lacking and the essence is deficient in blood, resulting in dizziness, weakness and lack of color. Anddrink is a yin evil, easy to hurt Yang Qi, the "Jin Kui Essentials" is proposed "sick phlegm drink, when warm medicine and the" as the treatment of drink method. Therefore, the treatment starts with warming the Yang and promoting water, followed by tonifying the spleen and benefiting the kidneys, and supplementing with products that benefit the Oi and nourish the Blood to restore the Oi and Blood. If there is a source of biochemical energy and blood, then the spleen will help to carry out its function. Ma Hongbin[15]suggested that "the treatment of renal edema should take care of the spleen and stomach and strengthen the spleen first". Self-designed Astragalus and Ling Jianshan Tang, composed of Wu Ling San and Si Miao Wan with Astragalus and Red Ginseng, minus Huang Bai, to cultivate the earth and make water, clean the source and clear the flow of water, andwarm the tonic that is so transforming the gas, gas and full healing, the healing out of nature. Shao Lao[16]made an experimental formula Duofa Xing Shui Tang according to the addition and reduction of Fu Ling Guiding Shui Tang and Dingshui Tang, whose formula consists of: Poria, Plantago ovata, Yam, Cornus officinalis, Rhizoma Atractylodis Macrocephalae, Poria, Adzuki bean, Motherwort, Wang Bu Liu Xing, Mu Xiang. The whole formula combines multiple methods to strengthen the spleen, move Oi, invigorate blood and promote water, which can quickly reduce swelling while promoting water without harming Yin.

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#### 3.4 The Spleen and Kidneys are Both Warm, transforming Qi and Moving Water

In the late stage of chronic kidney disease, the disease lasts for a long time, the body is weak, both the spleen and Yang are not invigorated, and the Yang of the kidney is injured, because the spleen is deficient in transporting water and dampness, biochemical essence; the kidney is deficient in warming Yang, transforming Qi and moving water, which in turn leads to the leakage of essence, so there is an accumulation of water and fluid, and the skin is overflowing with obvious and lasting signs of edema, in addition to swelling of the face and limbs, there can also be pleural effusion, ascites, etc. The disease is characterized by swelling, cold extremities, diarrhea and abdominal distension, lumbar soreness like folding, dizziness and weakness, greasy and moist moss, light and fat tongue, and slow and moist pulse. It is a deficiency of the spleen and kidney, and is considered to be a deficiency of the spleen and kidney. The disease is clinically recurrent and stubborn, so the main treatment should be to treat the root of the disease, together with diuresis to treat the symptoms. The famous formula of Zhang Zhongjing for treating water, Ling Gui Jie Gan and Zhen Wu Tang with addition and subtraction, is often used clinically[17]. In the "Golden Killing", there is a cloud: "short gas with micro-drinking, when the urine to go, Ling Gui Zhu Gan Tang is the main", which means warming the middle and strengthening the spleen and water; in the "Treatise on Typhoid", it is said that "Shao Yin disease, two or three days, to four or five days, abdominal pain, urine, heavy pain in the limbs, since the downward flow of water, this is a person with water, or cough, or urinary convenience, or downward flow of water, or vomiting, Zhen Wu Tang is the main", which means throwing warm kidney and Yang and water. In Ling Gui Zhu Gan Tang combined with Zhen Wu Tang, Radix et Rhizoma Pseudostellariae and Radix et Rhizoma Cinnamomi are used to warm Yang, transform Qi and promote water retention; Fu Ling and Atractylodes Macrocephala are used to strengthen the spleen and promote water retention, among which Fu Ling can also nourish the kidneys; together with Pig-ling and Ze Di, which are used to lightly permeate and promote dampness, their ability to promote water retention is even greater. The two formulae are used together to open the Xuan Rong Fu and promote the circulation of the three jiao[18-19].

#### 3.5 Dredges the Liver and Reduces Swelling, resolves Shao Yang

Wang Kentang's "The Standard Rules of Evidence and Treatment" says: "The two organs of the kidney and liver, living in the lower jiao ..... move in the kidney, as if the dragon fire in the sea, so the water attached to the dragon up. Move in the liver, as if thunder and fire out of the ground, the wind storm, so the water like waves. Today, water from the wind, is the liver and kidney and floating also", meaning that the liver and kidney fire into the wind, the wind swells the water for swelling. The clinical symptoms include edema, cold and heat, bitter mouth, dry throat, vomiting, bitter fullness in the chest, and stringy pulse. Nephrogenic edema is an evidence of deficiency of the origin and the symptoms, and the bridge between the deficiency of the origin and the symptoms is the dysregulation of qi[20]. Zhou Fuming[21]pointed out that liver depression and qi stagnation is the causative factor for the aggravation ofrenal edema, and Professor Wang Mao Hong also emphasized that renal edema is closely related to the loss of drainage of the liver[22], andthe liver is connected to spring qi, the five elements are wood, its nature is to produce and spread, with yin as the base and yang as the use, that is, the collection of blood as the body is yin, and the drainage is the function of yang, and the loss of drainage may lead to edema. It is good at treating renal edema from Shaoyang and Conjunctive Yin meridians, with the addition of Gorgonian, Cornus sativus, and Deer Herb as appropriate. According to Du Yumao, the most widely used formula for renal edema with stagnation of the three jiao qi organs is Chai Ling Tang, which is used to regulate the central organ with Xiao Chai Hu Tang, and Wu Ling San, which is used to dredge the lower jiao organs and to dissolve the qi, so that the water can flow and the evil can be eliminated[23]. In practice, the formula of Chai Hu class with Chai Hu as the ruler is widely used in the treatment of renal edema, taking the harmonizing effect of Chai Hu agent[24]to reconcile the patient's state of mixed cold and heat, deficiency and reality. In addition, we often see the clinical signs of deficiency and stasis in the syncretic yin, so we add peony and angelica to invigorate the blood and move the qi, which is effective and makes people peaceful.

#### 3.6 Benefit Qi and Nourish Blood, Promote Water Retention and Reduce Swelling

Chronic nephritis for a long time, will hurt the blood, appearing qi and blood deficiency win deficiency floating difficult to eliminate the symptoms. Deficiency of Qi, Blood, Yin and Yang is the main cause. Water and gas are closely related, treatment of water must be treated gas, the kidney is the main source of water, the lung is the main source of gas for water, so the treatment of water must take

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into account the benefit of gas, because the lung gas is sufficient, water can be adjusted; "blood is the mother of gas" for the material basis of the functional activities of the whole body, now blood deficiency and less essence, gas deficiency is not used. Both appear to be deficient and difficult to retreat, and the water does not transform. This is not sweating, diuresis, warming the Yang, attack and expulsion can win. It is necessary to use the method of benefiting Qi and nourishing Blood, accompanied by the method of promoting water. Professor Lu Renhe combined qi and blood with the vasculature[25], which coincides with Wang Qingren's idea of emphasizing qi and blood, and the treatment rule of benefiting qi and invigorating blood, nourishing blood and opening the vasculature[26]. The method of benefiting Qi and nourishing Blood is used in the beginning and end of middle and late stage kidney disease, and clinical medicine is mostly used for ginseng, Aconite, angelica, poria and peony. Still can reuse ginseng and astragalus to support and benefit the qi, which astragalus is the first important medicine for the qi, "the visible blood born of the invisible qi", so raw astragalus can make the qi and blood. And has the effect of regulating the whole body qi, blood and fluid, modern research shows that astragalus can be used as a modulating medicine [27], because it has the pharmacological effect of improving the immunity of the body, improving kidney function, etc., Tong Xiaolin academician even believes that "astragalus is a great medicine for the qi, raw then go to the surface water, hot then go to the dirty loss". When it comes to female patients, we should pay more attention to the conservation of the woman's acquired blood to fund the innate blood and promote the recovery of the disease; at the same time, we should also deal with the relationship between supplementing the deficient and dipping the actual, not to congest the qi and blood, and not to damage the qi and blood by eliminating the evil qi.

#### 4. Conclusion

The disease is long-lasting, complex, and lingering. Clinically, the four diagnoses are combined to to dentify and treat the evidence, and are applied flexibly for different stages of the disease, and should not be confined to one method or one party. In the later stage, asmall amount of tonic drugs can be used to eliminate the evil without harming the good. In-depth excavation of traditional Chinese medicine theories, diversification of the advantages of Chinese medicine therapies, and improvement of the treatment framework, but the flexible application rules in clinical practice have yet to be explored.

#### References

- [1] Fu L,Xiang GW,Li SH. The Six Meridians of the Treatise on Typhoid and Renal Edema. Jilin Chinese Medicine, 2020, 01:48-51+55.
- [2] Liu T T, Jim Y L, Yang L P, Wang Y Y, Yang H M. Exploring the Treatment of Iga Nephropathy from the Gastrointestinal Theory Based on the Intestinal-Renal Relationship. Chinese Journal of Traditional Chinese Medicine Information, 2020, 10:17-20.
- [3] Hu, Brilliant Q, Zhang, Hui, Hu, R, Jin, Z, Kai. A Study on the Literature of Chinese Medicine for the Treatment of Renal Edema. Journal of Shaanxi University of Traditional Chinese Medicine, 2021,06:132-136.
- [4] Clinical Experience of Chen Yunfu in the Treatment of Chronic Nephritis. Sichuan Traditional Chinese Medicine, 1997, 06:6-7.
- [5] Tian Y L, He Z Y. Collection of Professor He Z Y's Experience In The Treatment of Renal Edema Using The Method of Lifting The Pot And Uncovering The Lid. Clinical Research in Chinese Medicine, 2020,15:1-3.
- [6] Gu Huixuan, Wei Dan, Jin Caiyuan, Liu Zhimei, Jin Feng. Experience of chief physician Jin Feng in identifying and treating renal edema. Journal of Gansu University of Traditional Chinese Medicine, 2020.02:40-42.
- [7] Wang Zheng, Xiong Yunzhao, Wang Xuan, Wu Limin, Chen Lixiang, Wang Miao, Liang Lijuan, Xu Qingyou. Zhao Yuyong's experience in treating renal edema from the lung theory. Chinese Journal of Traditional Chinese Medicine, 2017, 03:1108-1110.
- [8] Wang YJ. Eight methods for the treatment of renal edema. Journal of Zhejiang College of Traditional Chinese Medicine, 2004,02:4-7.
- [9] Zhou H. Analysis of Professor Zhang Xuewen's treatment of cranio-cerebral water stasis evidence from "Blood is water when it is not favorable" in The Essentials of Jin Kui. New Chinese Medicine, 2015,04:323-324.
- [10] Liu YN, Su YJ, Si HL, Wang YJ. Experience of National Medical Master Zhang Xewen's theory of blood stasis in the treatment of intractable renal edema . Shaanxi TCM,2021,04:506-509.

#### ISSN 2706-6819 Vol.4, Issue 5: 19-24, DOI: 10.25236/IJFM.2022.040505

- [11] Gan Hongqiao, Wu Wei. Professor Wu Kangheng's experience in treating renal edema from phlegm and stasis theory. Sichuan Traditional Chinese Medicine, 2016, 06:1-3.
- [12] Xiong R.B., Fu X.J. Experience of Fu Xiaojun, a famous Chinese medicine doctor, in treating renal edema from "deficiency, stasis and dampness". Chinese Journal of Integrated Chinese and Western Medicine and Nephrology, 2021,06:538-540.
- [13] Zeng R X, Huang K R. Changes in blood rheology in uremia with chronic nephritis and clinical correlation. Journal of Clinical and Experimental Medicine, 2006, 05:579.
- [14] Wei Jinhui, Ma Hongbin, Wang Qingmiao, Shang Junfang. Director Ma Hongbin's experience in treating renal edema using Qi Ling Jian Spleen Tang . Shanxi Journal of Medicine, 2018, 24:2999-3002.
- [15] Shao Chaodi's experience in treating renal edema using multifaceted Xing Shui Tang. Liaoning Journal of Traditional Chinese Medicine, 2015, 01:40-41.
- [16] Gao, Changbai, Hu, Wenzhong, Jiang, Nan, Wang, Baojuan, Yang, Meijuan, Xu, Yun. Study on the mechanism of the effect of Zhenwu Tang combined with Linggui, Zhigang and Gan Tang to improve water and sodium retention in a rat model of cardio-renal syndrome. Journal of Tianjin University of Traditional Chinese Medicine, 2020,03:316-319.
- [17] Jian Xiao Ke,Li Xin Hua. Efficacy of Ling Gui Jie Gan Tang combined with Zhen Wu Tang in the treatment of chronic glomerulonephritis. World Journal of Integrative Medicine, 2020, 06:1130-1132.
- [18] An investigation of the treatment of renal edema with "Tongxuan Qi to Enlighten the Kidney and Transform the Three Jiao" by Zhenwu Tang . Journal of Chinese Medicine, 2022,03:471-474.
- [19] Pang M., Shi L., Xu L. J., Liu W. J. Four methods for regulating qi in renal edema . Beijing TCM, 2021,06:610-612.
- [20] Zhou F. A preliminary investigation into the evidence and treatment of renal edema. Zhejiang Journal of Traditional Chinese Medicine, 2020, 01:13-14.
- [21] Li H Q, Zhu X J, Dai D F, Huang Y, Wang M H. Treatment of nephrogenic edema based on the theory of "loss of drainage of the liver". Shi-Zhen Guomao Guomao, 2021,12:2970-2971.
- [22] Hu T.C., Dong Z.H. Experience of Professor Du Yumao in treating chronic renal failure with Chai Ling Tang as the main treatment . Sichuan Traditional Chinese Medicine, 2015, 02:10-11.
- [23] Meng Fanzhang, Zhao Jinxi. Zhao Jinxi's experience in treating chronic renal failure with cold and warmth. Beijing Traditional Chinese Medicine, 2020,02:154-156.
- [24] Liu L. Lv Renhe's treatment of "miniature obstruction in the kidney complex" from the perspective of benefiting Qi and nourishing Blood. Global Chinese Medicine, 2018, 12:1938-1939.
- [25] Zhang Tiancang. Historical origin of the development of the doctrine of "long-standing diseases entering the liao". Chinese Medicine Research, 2015,02:3-5.
- [26] Xu Kunyuan, Gu Chengjuan. Raw astragalus, zedoary, and rhubarb in the treatment of renal edema--a collection of three small prescriptions by Tong Xiaolin . Jilin Traditional Chinese Medicine, 2020, 10:1276-1278.
- [27] Tong, S.L.. The Collection of Vixen Medicine [M]. Shanghai: Shanghai Science and Technology Press, 2020.