

# Treatment of Renal Diseases based on Zang-evil Fu-organ Extraction Method

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**Abstract:** This paper expounds the theoretical connotation and clinical application of TCM Zang-evil fu-organ extraction method in renal diseases, and briefly discusses the Zang-evil fu-organ extraction method from three aspects: bladder discharge, three-jiao discharge and intestinal discharge. It is clear that Zang-evil fu-organ extraction method has important clinical application value in renal diseases.

**Keywords:** Zang-evil fu-organ extraction method, Bladder discharge by renal evil, Three jiao emergence of kidney evil, Enteroenteric of evil kidney.

## 1. Introduction

The traditional medical theory of the motherland believes that the disease is more vacuity, fu-fu disease is more real, but if the disease is real, when the drainage of its fu-organs to drive away evil, so that the fu-organs Tongzang-an, that is, the viscera out of the method. Mastering this principle of treatment and guiding clinical practice, it is of great benefit. The theoretical origin and clinical application in renal diseases are briefly discussed below.

## 2. The Connotation and Theoretical Origin of Zang-evil Fu-organ Extraction Method

Zang-evil fu-organs out method refers to the treatment theory that when the five zang-organs are affected by evil, the evil qi comes from the six fu-organs, and the evil qi is removed from the fu-organs. The theory of "Zang-fu internal and external harmony" put forward in Lingshu · Benzang and Lingshu · Benshao is the earliest theoretical source of Zang-fu extraction method. Ming Li Chen mentioned the theory of "Zang-fu harmony" in "Introduction to Medicine" in "Zang-Fu Harmony": "Heart and gallbladder are connected..... The kidney is connected with the three jiao, the kidney is connected with the life gate, and the beauty of this combination is also ", which further reveals the "communication" relationship between the five viscera and the six fu-organs. Because of the relationship between viscera and viscera in physiology, it is bound to affect each other in pathology. So far, the theory of viscera emergence has begun to take shape. "Plain Question · Five viscera" points out that the viscera "hides the essence without draining", and the fu-organs "transmit chemical substances without hiding". If the viscera essence does not hide, turbid evil storage, Yuan is really not smooth, although when the "actual diarrhea", but the five viscera to guard as a supplement, draining its viscera is waste its gas, so with the six fu-organs "to use, to reduce to along" the characteristics of the replacement of viscera draining evil. Therefore, if the disease spreads the fu-organs, it can be regarded as the sign of the worsening of evil qi, and the fu-organs disease and viscera may be the sign of evil qi depression [1]. In the treatment, promoting the evil qi in the viscera to come out by the fu-organs is an appropriate idea to cure disease.

## 3. Theoretical Basis of Applying Zang-evil Fu-organ Extraction Method to Renal Diseases

The second is the main way to exclude metabolites and pathogenic agents [2]. "Suwen, Jinguizhen Speech" cloud: "kidney..... Awakening in the two Yin." Kidney qi through the promotion and solid action, the main division of the excretion of the second stool, kidney qi solid to promote the right, then the bladder opening and closing degree, large intestine transmission has a node. In addition, Zhang Jibin pointed out in the "Class Classics": three jiao is the house of sacrilege, the bladder is the house of body fluid, the kidney is the water viscera and the land water house, the reason is of course ", improved the "Lingshu Benzang" "kidney with bladder, three jiao" theory, explained from the basic theory of "Suq · Cough Treatises": "kidney cough, then the bladder is..... If you cough for a long time, you will suffer from three jiao." Therefore, there is harmony and communication between kidney and bladder, three jiao and large intestine. Based on this, this paper focuses on the physiological and pathological basis and clinical application of bladder, large intestine and three-jiao emergence of renal evil.

### 3.1 Physiological and Pathological Basis and Clinical Application of Bladder Exhalation by Pathogenic Kidney

#### 3.1.1 Physiological and pathological relationship between kidney and bladder

The kidney is in harmony with the bladder. "On the Causes of Diseases · Bladder Diseases" cloud: "The body fluid of five grains and five tastes is returned to the bladder, vaporized and divided into the blood to become bone marrow, ..... The rest of the body fluid is inside the bladder to urinate." The drainage of urine depends on the kidney qi transpiration to open the state capital, such as "Su ask Linglan secret book" recorded: "bladder, the official of the state capital, body fluid is stored, gasification can come out." Pathological aspects, kidney Yin deficiency is heat, the evil of deficiency heat burns Yin fluid and orifice, so the urine dripping astringent pain; Kidney-yang deficiency can not vaporize the bladder, so urine accumulates in the bladder and distends; The physical evil of

the bladder such as stones can also be forced by the kidney and see hematuria, urgent urination, low back pain and other diseases. Modern pathology believes that the bladder retention of a large amount of urine is accompanied by an increase in its internal pressure, and the return of inflammatory factors can lead to a decline in renal function. Conversely, the decrease of renal perfusion can also lead to the decrease of urine volume [3].

### 3.1.2 Clinical application of bladder ejection by renal evil

Kidney water, edema, although a syndrome of the lungs, spleen, kidney, three jiao, but the kidney carrying bladder transpiration and gasification unfavorable is the most, as the "Zangjing" cloud: "kidney qi zhuang water also in the kidney, kidney qi deficiency water scattered in the skin", "Hexan Six books" is clearly pointed out: "the method of treating wet, unfavorable urine, not its treatment also". Therefore, doctors have always treated edema and panyin are all lucky in the kidney to conghua, light infiltration to Tongli. Such as Shaoyin disease kidney Yang deficiency failure, water qi overflowing, with Zhenwu Tang warming Yang Li water; Kidney and bladder gasification is not good, water flooding the skin, urine is not good, with kidney Qi pills to stimulate kidney qi, diarrhea drink evil. In addition, Shuzao Yinzi, pig decoction, Wuling powder in Tuckahoe, white art, etc., can divert water from the bladder, and slow the kidney of steaming water to vent gas, the main water is not good. Zhang Chunyan [4] et al. treated primary nephrotic syndrome by applying supplemented Astragalus Liuwei Dihuang Decoction, which was characterized by spleen-kidney qi deficiency and stasis, and significantly improved the hypercoagulable state of the patient's blood and reduced urinary protein level. Among them, yam and Goulon seed tonifying kidney Qi, Astragalus, white grass root, poria, and Zexia benefiting kidney dampness were used. Dong Fei-xia et al. [5] prepared their own prescription Guben Qudu Yishen Decoction, which not only improved clinical symptoms such as fatigue and edema in patients with chronic kidney disease, but also significantly reduced Cys-C, serum creatinine, urea nitrogen and other indicators of patients, and significantly delayed the progression of chronic kidney disease. Chinese yam, Eucommia and dogwood are used for tonifying kidney. With salvia miltiorrhiza, Asiaticum asiaticum, June blood of kidney stasis, and then with poria, alisma, money grass, white grass root infiltration of urine to make the evil gas through the fu-organs out, the method of supplementation, change, benefit, before and after corresponding, complement each other. In addition to the kidney water is not good enough to cause wet accumulation into swelling, the kidney of the wet heat evil gas can also be eliminated through the state capital house, "Prepare urgent Qianjin Decoction" with gardenia decoction to treat kidney law small abdominal distension, urine yellow red drain, stem pain, scrotal sores, in the formula with gardenia, peony, Tongcao, Shiwei, talc, light bamboo leaves to ease urine, guide kidney house wet heat from the state. "Shengji total Record" in the diarrhea kidney Rhubarb decoction, the treatment of kidney yuan solid heat, small peritoneal distention, waist heavy adverse, dream of water, with diarrhea, five plus skin, red poria benefit damp heat, clean house, infiltration of lower jiao bladder, lead kidney yuan solid heat out.

## 3.2 Physiological and Pathological Basis and Clinical Application of Three Jiao Emergence of Kidney Evil

### 3.2.1 Physiological and pathological relationship between kidney and tri-jiao

For the fu-organs of the three jiao, all the generations of doctors worship "Su Question Linglan Esoteric": "the three jiao, the official, the waterway out of how", but although the three jiao has a specific function, but its shape and quality basis since the "difficult classic" all the families have been disputing, this article thinks that the peritoneal membrane of modern medicine should be the genus of the three jiao. "Class Scriptures · Tibetan elephant" pointed out: "three jiao, there is a fu, cover the viscera outside, the body, encompassing the viscera, a cavity of the big fu also", peritoneum as a layer in the abdominal cavity smooth and thin serous membrane, greater omentum, lesser omentum also with the apron covering the periphery of abdominal organs; "Lingshu · This article" pointed out: "The twelve viscera is only the three jiao, all viscera have no match, so it is called lonely house." The total peritoneal area of adults can reach 2.2m<sup>2</sup>, which is exactly consistent with the above three jiao theory. "Difficult Scriptures · Sixty-six Difficult" cloud: "Three jiao patients, the original qi is also different, the main passage through the three qi, through the five viscera and six organs", indicating that the passage of qi through the three jiao as a channel, modern medical findings [6], peritoneal capillary network blood flow can reach 70~100ml·min<sup>-1</sup>, peritoneal fluid absorption rate can reach 8% of body weight per hour, peritoneal microcirculation (abdominal collaterals) is patency, Then the blood carries qi to the viscera. Therefore, the peritoneum conforms to the three-jiao theory of traditional medicine in terms of location, shape and function.

The relationship between kidney and three jiao is first seen in Li Chen's "Introduction to Medicine · Zang-Fu Intersections" quoted in "Five Tibetan-piercing Theory": "Heart and gallbladder intersections..... The kidney is connected with the three jiao." Modern embryogenetic theory holds that the peritoneum and urinary organs such as kidney, bladder, ureter and testis are all originated from the mesoderm. The kidney Yang steaming liquid is good for the exertion of Jin, then the water evil drink can be eliminated. "Reading Medical Essays" has a theory: "The life of drink is also due to the loss of Sanjiao gasification, Sanjiao loss of luck, due to the lack of life fire"; Sanjiao expansion of water, then the line of water down turbidimetric period, "Doctor Jin Jian": "Evil obstructing Sanjiao, then Rongwei can not, water no way, then extravasation of the body, a heavy." Therefore, kidney and tri-jiao (peritoneum) total water metabolism. Because the patients with end-stage renal disease have renal failure, water dampness stasis toxin and other pathological products choked up the sanjiao, modern peritoneal dialysis can open up the sanjiao dehydrating method to remove poison and danger.

### 3.2.2 Clinical application of three jiao emergence of kidney evil

"Class by graph wing" cloud: "All the things that are gasification, non-fire is not enough to live", "Song Ya Zunsheng book" further pointed out: "three jiao gasification implementation, urine diarrhea; Because of the decline of

kidney Yang in patients with end-stage kidney disease, coupled with the Yin cold liquid in peritoneal dialysis, which directly enters the three jiao and harms the Yang qi of the viscera, it is necessary to warm the temperature of the three jiao to warm the cold of the three jiao. Wei Lao [7] proposed the characteristics of traditional Chinese medicine syndrome of "insufficient Yang" and "excessive stasis" for patients with abdominal dialysis whose solutes clearance and ultrafiltration function are reduced. In addition to the modified pill, Zhenwu Decoction was used to warm Yin cold, warm Yang to purify qi, Danshen and Chuanxiong to eliminate peritoneal stasis, and rhubarb and turmeric were used to "reduce the turbidity in Yin" according to the method of "Differentiation of Typhoid Plague". Experiments have proved that it can effectively delay peritoneal fibrosis and the formation of new blood vessels and improve the filtration capacity [8]. Peritoneal fibrosis causes progressive loss of peritoneal structure and function, resulting in decreased dialysis efficiency and failure of peritoneal ultrafiltration and transport function, which is the main reason for PD patients to withdraw from dialysis [9]. Peritoneal fibrosis can be attributed to the theory of "kidney micro syndrome" of traditional Chinese medicine [10]. Traditional Chinese medicine intervenes in the process of peritoneal fibrosis by strengthening spleen and kidney and removing blood stasis to reduce turbidity. The therapeutic mechanisms are mainly studied from anti-fibrotic targets, mainly including fibrogenic factors and pathways, among which intervention in TGF- $\beta$ 1/Smads pathway activation and mesenchymal trans differentiation of peritoneal epithelial cells is a classic pathway. At present, there is more evidence in clinical studies on the traditional Chinese medicine compound "Fushen Granules" [11], which has been proved by multi-center RCT studies to have the effect of anti-peritoneal fibrosis in patients with peritoneal dialysis. It can clear the abdominal collages, help the pneumatosis of three jiao to help the kidney detoxify, improve the dialysis efficiency, and significantly reduce the toxin level in dialysis patients.

### 3.3 Physiological and Pathological Basis and Clinical Application of Large Intestine Outflow by Renal Pathogen

#### 3.3.1 Physiological and pathological relationship between kidney and large intestine

The kidney is the main water, the large intestine is the main fluid. The Neijing says, "The kidney is the stomach. Therefore, the kidney Yin is sufficient, and the large intestine is plump." "By diseases of the large intestine... There are Yin deficiency by the kidney channel, can not moisten the intestine "" Syndrome Differentiation Record" cloud: "kidney water dry and large intestine water dry..... Treating the water of the large intestine alone, but not benefiting the water in the kidney, the water of the large intestine is not raw, and the fire of the large intestine is ceaseless ", so the physiological function of the large intestine main body depends on the domination of the kidney on the water; Similarly, the Difficult Sutra · Thirty-one Difficult: "Lower Jiao... The Lord is clear and turbid, the Lord is out and not inside, to preach also [12] ", "Brush flower Medical Mirror" further pointed out: "The large intestine, the orificum of kidney Yin..... However, the intestinal mouth is connected to the small intestine, and the valley road is the door of all dirty deflated, and the negligence

of opening and closing, and the dirty trapped." It can be seen that if the intestinal fu-organs are turbid-toxic and difficult to discharge, the kidney will be a rotten water lycerus.

In modern medicine, the bidirectional relationship between the kidney and the intestine is called "entero-renal axis". In pathological condition, due to the decline of renal function, the adverse volume accumulation and toxin clearance, intestinal mucosal edema, intestinal peristalsis and excretion function will be reduced, and even the damage of intestinal mucosal barrier function and the disturbance of intestinal flora structure may be caused. On the contrary, microorganisms such as Enterobacteriaceae hydrolyze urea by producing urease to form ammonium hydroxide, Further, it induces the destruction of intestinal epithelial tight junctions, characterized by depletion of atretic protein, Claudin-1 and atretic band protein, resulting in increased intestinal permeability and the entry of toxins and bacterial fragments into the systemic circulation, causing systemic micro-inflammation and aggravating kidney damage. The above processes are often mutually causative and vicious cycle [13].

"Su Wen · Yin and Yang should be like a great Theory" cloud: "It is in the skin, sweat and hair... Its lower, lead and exhaustion of ", "Qingyang out of the upper body, turbid Yin out of the lower body", so it is necessary to choose the appropriate treatment method according to the nature of pathological products, for kidney function adverse wet turbid internal, fu qi impassability, when the treatment of Tong Fu drainage turbidity, then the zang qi and. The large intestine by the five viscera turrid gas, for the transmission of the house, conduction of dross, at the right time, this is the viscera out of the method and a wonderful.

#### 3.3.2 Clinical application of intestinal exhalation of renal evil

Experiments have shown [14] that the body excretes 75% of toxins through the kidney. When chronic kidney disease progresses to stage 3, the kidney can only excrete about 20%, while the proportion of toxins excreted through the intestine is usually no less than 60%. This shows the importance of the intestine in the treatment of chronic renal insufficiency. At present, patients with chronic kidney disease are treated with the method of removing viscera and bowels, which promotes stool excretion and expels kidney toxin and turbidification. Wu Qiaomu et al. [15] confirmed that colon dialysis combined with enema of traditional Chinese medicine in the treatment of non-end-stage chronic renal insufficiency is superior to colon dialysis alone in improving TCM syndrome scores. Feng Li et al. [16] selected 95 patients with chronic renal insufficiency in stage CKD3-5 and randomly divided them into the experimental group and the control group for 4-week treatment observation. The results showed that high colon dialysis combined with TCM enema could significantly reduce the levels of toxins and inflammatory mediators in the patients and inhibit the inflammatory response compared with simple TCM enema ( $P < 0.05$ ). In clinical practice, traditional Chinese medicine enema is also often used after colon dialysis to treat chronic renal insufficiency, which can increase toxin excretion. This is consistent with the theory of expelling the turbidities of the fu-organs in order to ensure the peace of the kidney. Therefore, colon dialysis in modern medicine and

enema with traditional Chinese medicine belong to the category of zang-evil fu-organs extraction.

The realization of colon dialysis technically still mimics the principle of peritoneal dialysis, using different concentration differences inside and outside cells to transport transmembrane substances [17], but compared with peritoneal dialysis, there are different ways to benefit from it. First of all, the intestinal tract is fully cleaned before colon dialysis to discharge most of the intestinal contents. In this process, part of metabolites and uremic toxins are discharged before Chinese medicine is injected, which enhances the role of subsequent Chinese medicine enema. Secondly, there is a unique cystic protrusion on the colon wall -- colon bag, and the space formed between the colon bag and the colon wall can be used as a dialysis pool. In addition, the bag-like round trip of the colon and the segmented propulsion of the colon make the intestinal liquid fully stay and absorb, creating superior conditions for the absorption of the liquid. The absorption of Chinese medicinal liquid in the colon is similar to that of intravenous administration. With intestinal mucosa as a barrier, about 3/4 of Chinese medicinal liquid enters the human blood circulation directly through the anal canal vein and the subintimal rectum vein, which better avoids the liver first-pass effect and improves the absorption concentration of drugs in the body [18]. Most clinical TCM enema formulations use Dahuang Fuzi Decoction as the base, Fuzi Wuhuang, and the tannin in rhubarb reacts with aconite, and the substances generated will not be absorbed by the intestine, thus reducing the toxicity of aconite [19]. The heat of aconite and the cold of rhubarb are in harmony with each other to play the role of relieving turbidity and raising Yang.

At present, although there are many RCT studies on TCM enema in the treatment of chronic renal insufficiency, there are few clinical studies on dialectical treatment. Li Hongjuan et al. [20] divided patients with chronic kidney failure classified as spleen-kidney qi deficiency syndrome, spleen-kidney Yang deficiency syndrome and liver-kidney Yin deficiency syndrome, and used different colon dialysis prescriptions. The results showed that dialectical colon dialysis prescription was more effective than single colon dialysis prescription in the treatment of chronic renal insufficiency, and the use of TCM syndrome differentiation prescription for colon dialysis could also prevent cardiovascular complications. Delay the progression of chronic renal insufficiency. In addition, different treatment frequency and placement have different curative effects. Chen Qin et al. [21] used TCM enema with different frequencies (once a day, once every other day and twice a week) for patients with chronic renal dysfunction in stages III to V, and the results showed that TCM enema performed once every other day could significantly reduce toxin levels and inflammation-related indexes in the body compared with other frequencies. The composition of clinical Chinese medicine enema formula is mostly based on Dahuang Fuzi decoction with dandelion, oyster, salvia miltiorrhiza, Chuanxiong, etc., with the royal medicine of Rhubarb to promote fu-draining turbidity, clearing heat and promoting blood. "Compendium of Materia Medica" records that "rhubarb can discharge blood and shut down gastrointestinal muck". Modern pharmacological studies have found that rhubarb can increase the expression of Claudin-1 and

Occludin in colonic epithelium of rats with acute renal insufficiency, repair intestinal barrier, and reduce indoxyl sulfate and lipopolysaccharide levels in rats with acute renal insufficiency [22]. After changing the drug administration pathway, it is found that, Rhubarb enema in 5/6 nephrectomized CRF rats can significantly reduce the serum levels of trimethylamine nitrogen oxide and precursor trimethylamine [23].

With the deterioration and progression of renal function in patients with chronic renal insufficiency, the dirty matter accumulates poison for a long time, blocks the middle jiao, makes the spleen and stomach clear qi does not rise, turbidness does not fall, and there are dry stool, nausea and vomiting, abdominal distension and other manifestations, all of which belong to the gastrointestinal symptoms complicated in the middle and late stage of chronic renal insufficiency. Modern medical research believes that its pathogenesis may be related to the accumulation of metabolic toxins (guanidine and amines) caused by impaired renal function, which causes changes in gastrointestinal dynamics [24], the decrease of renal clearance, the disturbance of gastrointestinal hormone (leptin and various gastrointestinal peptide hormones) secretion [25], and the damage of gastric mucosa caused by renal anemia [26]. Ma Libing [27] conducted high colon dialysis for 12 weeks on 60 non-dialysis patients with chronic renal insufficiency stage 3-5, and found that the incidence of gastrointestinal symptoms decreased from 93.3% to 8.3% after treatment. The results showed that colon dialysis combined with Chinese medicine enema is an excellent choice for the treatment of digestive tract symptoms such as constipation, nausea and abdominal distension in the middle and late stage of chronic renal insufficiency.

#### 4. Nodules

Evil qi can cause the imbalance of Qi and blood Yin and Yang in human body, and the pathogenic evil is not external seven emotions, diet, external feeling, fatigue and so on. To remove evil spirits, as "reading medical Essays" cloud: "Where the cure, always should make evil have a way out." Therefore, "make evil have a way out", which is the core of the viscera out method. Kidney evil turbid storage, to the bladder, three jiao, gut to remove evil out, are "along with its nature" and "down its turbid" rule, so that evil to dirty and. It is often reflected in the clinical treatment of renal diseases. It can not only guide the practical application of traditional Chinese medicine prescriptions, but also be an effective clinical treatment for renal diseases with modern medical techniques such as peritoneal dialysis and colon dialysis.

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