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Research Advances in Integrating Traditional Chinese and Western Medicine for Chronic Renal Failure

Chenrui Wang[1], Yanlong Zhao[2,*]

[1]Shaanxi University of Chinese Medicine, Xianyang 712046, Shaanxi, China
[2]Shaanxi Provincial Hospital of Chinese Medicine, Xi'an 710003, Shaanxi, China
**Correspondence Author*

Abstract: ***Chronic renal failure represents the ultimate outcome of various kidney diseases. Clinically, treatment approaches for this condition are categorized into Western and Traditional Chinese Medicine (TCM) methods. This study will systematically review Western medical diagnostic and therapeutic approaches, alongside traditional Chinese medicine perspectives on pathogenesis, syndrome differentiation, treatment modalities, and integrated approaches. It will summarize commonly used Western medications for chronic renal failure alongside clinical applications of Chinese herbal extracts, formulas, and external therapies. By synthesizing prior research, this work aims to clarify the advantages of integrated medicine, offering additional clinical guidance and insights.***

Keywords: Chronic renal failure, Integrated Chinese and Western medicine treatment, Review.

1. Introduction

Chronic renal failure (CRF) refers to a clinical syndrome characterized by progressive decline in renal function leading to failure, resulting from the slow progression of various chronic kidney diseases such as chronic glomerulonephritis, nephrotic syndrome, and diabetic nephropathy [1]. Pathologically, it is marked by glomerular sclerosis, tubular atrophy, and interstitial fibrosis. Clinical manifestations are primarily categorized into two major groups: metabolic disorders and systemic multisystem symptoms. This disease is complex, has a high prevalence, and is prone to multiple complications. Severe cases may develop sepsis, where infection can lead to organ damage, shock, or death [2]. Furthermore, the onset is insidious, with early symptoms being subtle or even absent. Some patients present only with back pain, anemia, or loss of appetite, which may be mistakenly treated as simple anemia, delaying proper management. Conventional Western medical treatment for CRF primarily focuses on managing the underlying disease, controlling blood pressure, blood glucose, proteinuria, and other symptomatic therapies, alongside renal replacement therapy. However, these approaches are relatively limited. Even in developed countries, the mortality rate among dialysis patients remains high at 21%–23% [3]. In contrast, Traditional Chinese Medicine (TCM) demonstrates significant efficacy in alleviating symptoms, improving patients' quality of life, reducing biochemical indicators, and slowing the progression of renal failure, highlighting its distinct advantages [4]. The following is a review of research progress in integrated Chinese and Western medicine for CRF treatment.

2. Western Medical Diagnosis and Treatment

2.1 Clinical Diagnosis

Chronic kidney failure represents the ultimate outcome of various kidney diseases. According to the Clinical Practice Guidelines for Chronic Kidney Disease established by the American Kidney Fund in 2002, chronic kidney disease (CKD) can be diagnosed based on any one of the following abnormalities: (1) Kidney injury (abnormal kidney structure or function, manifested by pathological, blood, urine, or imaging abnormalities) lasting ≥3 months. (2) GFR ≤60ml/min/1.73m^2, ≥3 months [5].

2.2 Clinical Management

Current treatment primarily involves dietary control, etiological therapy, symptomatic management, and renal replacement therapy. Overseas treatment regimens for non-dialysis patients typically consist of a low-protein diet (LPD) supplemented with either indispensable amino acids (EAA) or alpha-keto acid (KAA), combined with ACE inhibitors (ACEI) or angiotensin receptor blockers (ARB) [6]. Etiological treatment targets the underlying disease. Symptomatic management prioritizes controlling hypertension and proteinuria. Calcium channel blockers are commonly selected; Yang Jie et al. [7] found benidipine to be more effective than sustained-release nifedipine in controlling hypertension while also reducing urinary protein without adversely affecting renal function. Concurrent lipid control is essential, typically achieved with statins or combination therapy including ezetimibe. Fang Xingxing et al. [8] demonstrated that adding ezetimibe to fluvastatin therapy in CFR patients yielded more pronounced improvements in lipid profiles and renal function compared to fluvastatin monotherapy in the control group. Additionally, actively correct electrolyte and acid-base imbalances. Administer diuretics to edematous patients while monitoring for heart failure. Treatment primarily involves hemodialysis, with digoxin and digitoxin commonly selected as medications. Geng Yushan et al. [9] found that sacubitril/valsartan combined with hemodialysis significantly improved cardiac and renal function in patients with chronic renal failure complicated by heart failure, while effectively regulating peripheral serum potassium and BNP levels. Renal replacement therapy primarily encompasses three modalities: hemodialysis, peritoneal dialysis, and kidney transplantation.

He Dong and Liao Jing [10] noted that peritoneal dialysis offers advantages including higher early survival rates, lower cross-infection rates, and superior preservation of residual renal function compared to hemodialysis. However, kidney transplantation faces challenges such as severe organ shortage and the requirement for lifelong immunosuppressive medication post-surgery, making it difficult to achieve [11].

3. Overview of Traditional Chinese Medicine

3.1 Etiology and Pathogenesis

Although classical TCM texts do not explicitly name chronic renal failure, its symptoms align with TCM categories such as ‘edema,’ ‘low back pain,’ ‘turbid urine,’ ‘kidney wind,’ ‘kidney obstruction,’ and ‘urinary retention’ [12]. Modern TCM practitioners generally characterize this condition as a pattern of underlying deficiency with superimposed excess, representing a complex interplay of deficiency and excess. The pathogenesis can be summarized into four aspects: ’deficiency, dampness, stasis, and toxin.’ Among these, ‘deficiency’ is the root cause, while dampness, toxin, and stasis are the manifestations. The root deficiency primarily involves deficiency of the lung, spleen, stomach, and kidney, with spleen-kidney yang deficiency being predominant. Meanwhile, ‘dampness, toxin, and stasis’ persist throughout the course of chronic kidney disease [13]. Contemporary scholars have also proposed insights into the pathogenesis of CRF. Zhao Xianfeng [14], through clinical observation under Guan Jianguo, summarized that ‘deficiency of zang-fu organs with internal obstruction by dampness, turbidity, and blood stasis’ constitutes the primary pathogenesis. He emphasized spleen-kidney deficiency as the key factor in disease onset. Ma Xiaoyan and Xu Jingfang [15] proposed that the mutual entanglement of spleen-kidney deficiency and pathogenic toxins represents the pivotal pathogenesis of chronic renal failure.

3.2 Pattern Differentiation

Following the criteria established by the Chinese Association of Traditional Chinese Medicine's Nephrology Branch in 2006, 'Diagnosis, Pattern Differentiation Analysis, and Efficacy Evaluation of Chronic Renal Failure (Trial Protocol)' [16], patterns are categorized into two types: deficiency syndrome and excess pattern of exterior syndrome. Deficiency syndrome include spleen-kidney qi deficiency syndrome, liver-kidney yin deficiency syndrome, spleen-kidney yang deficiency syndrome, qi-yin deficiency syndrome, and yin-yang deficiency syndrome. Excess patterns of exterior syndrome include Wind-Movement Pattern, Damp-Turbidity Pattern, Damp-Heat Pattern, Heat-Toxin Pattern, Blood Stasis Pattern, and Patterns Without Concurrent Patterns. Spleen-Kidney Qi Deficiency commonly presents with shortness of breath, reluctance to speak, generalized fatigue, susceptibility to colds, abdominal distension, and poor appetite. Over time, it may progress to Yang Deficiency Pattern, manifesting as aversion to cold and clear, prolonged urination, indicating Spleen-Kidney Yang Deficiency. As for Liver-Kidney Yin Deficiency Syndrome, symptoms include soreness in the lower back and knees, dry stools, heat in the palms and soles, and dry lips. Over time, this may progress to Qi-Yin Deficiency Syndrome, where symptoms of Yin deficiency are compounded by Qi deficiency manifestations such as fatigue, shortness of breath, lethargy, and a lackluster complexion. Different practitioners in modern Chinese medicine have varying perspectives on the specific pattern differentiation and classification methods for CRF. However, most practitioners primarily approach it from two aspects: deficiency of the body's vital substances and excess of pathogenic factors. Deficiency of the body's vital substances primarily involves deficiency of qi, blood, yin, or yang, often involving multiple organs such as the spleen, stomach, kidneys, bladder, lungs, brain, liver, and heart, with clinical manifestations varying in emphasis. Pathogenic excess manifests as damp-heat, blood stasis, or turbid toxins, varying in severity and potentially coexisting. Liu Xusheng et al. [17] categorized the deficiency syndrome of CRF into seven types: spleen-kidney qi deficiency syndrome, spleen-kidney yang deficiency syndrome, spleen-kidney-lung deficiency syndrome, liver-kidney yin deficiency syndrome, spleen-kidney-heart deficiency syndrome, spleen-kidney qi-yin deficiency syndrome, and yin-yang deficiency. They further categorized patterns with concomitant pathogenic factors into nine types: wind-heat exogenous pathogen, wind-cold exogenous pathogen, phlegm-heat, damp-heat, turbid dampness, water-dampness, blood stasis, wind-dryness, and wind-movement. Based on extensive clinical experience, Xu Daji et al. [18] classified CRF into five patterns: damp-turbidity with heat accumulation obstructing the middle jiao; spleen qi deficiency with qi and blood insufficiency; damp-turbidity transforming to heat with blood stasis obstruction; spleen-kidney yang deficiency with internal accumulation of damp-turbidity; and spleen-kidney deficiency with both yin and yang deficiency.

4. Clinical Treatment

4.1 Chinese Herbal Extracts

For treating CFR, commonly selected Chinese herbal extracts include Shen Kang Injection, Danshen Chuanxiongzine Injection, and Cnidium Injection. ‘Shen Kang Injection is indicated for chronic renal failure characterized by dampness-turbidity and blood stasis syndrome. Its primary ingredients — Rheum palmatum, Salvia miltiorrhiza, Carthamus tinctorius, and Astragalus membranaceus — exert effects of descending counterflow, purging turbidity, invigorating qi, activating blood circulation, unblocking bowels, and draining dampness’ [19]. The active component of the Chinese herb Asarum sieboldii is flavonoids, which exert pharmacological actions including vasodilation, reduction of peripheral vascular resistance, and increased arterial blood flow. These effects effectively target multiple stages of chronic renal failure progression. Li Xichun and Li Weidong [20] found that Cynanchum wilfordianum injection reduces blood urea nitrogen (BUN), creatinine (Cr), and blood pressure in CRF patients. It also significantly improves clinical symptoms, delays renal function deterioration, enhances patient quality of life, and postpones the initiation of dialysis.

4.2 Compound Chinese Medicines

Many classical formulas preserved in traditional Chinese medicine provide valuable insights for CFR treatment.

Compound Chinese medicines primarily utilize classical formulas or proprietary Chinese medicines to exert effects such as strengthening the spleen and tonifying the kidneys, replenishing qi and nourishing yin, warming yang and promoting diuresis, and clearing heat and transforming dampness. Taking classical formulas as an example, the True Warrior Decoction (Zhen Wu Tang) from the Treatise on Cold Damage and Miscellaneous Diseases demonstrates significant efficacy in treating water-dampness overflow and spleen-kidney yang deficiency syndromes. The principal herb, Aconite (Fu Zi), warms the kidneys, assists yang, dispels cold, transforms qi, and promotes diuresis. The secondary herb, Poria (Fu Ling), drains dampness and promotes urination, facilitating the elimination of water pathogens through the urinary tract. The addition of Atractylodes (Bai Zhu) further strengthens the spleen and kidneys through warming action. Ginger (Sheng Jiang) warms and disperses water qi. Bai Shao promotes urination, while combined with Tu Si Zi and Gou Qi Zi, it fortifies the spleen and kidneys. Shi Meixue [21] observed 36 CFR patients treated with Zhen Wu Tang and 35 treated with Wen Pi Tang, concluding that modified Zhen Wu Tang yields superior therapeutic outcomes for chronic renal failure, effectively improving renal function. Zhao Tong et al. [22] compiled and analyzed clinical cases of Professor Gao Jining treating chronic renal failure. They found significant efficacy in treating early-to-mid stage CFR patients (spleen-kidney qi deficiency pattern) with modified combinations of Shuyu Pill and Taohuochengqi Decoction. Shuyu Pill originates from Golden Cabinet Essential Prescriptions: Blood Bi and Consumption Diseases, Pulse Patterns and Treatment, Chapter 6: For all deficiencies of consumptive diseases and wind-induced ailments, Shuyu Pill is the primary treatment." Though comprising twenty-one herbs, the formula exhibits rigorous structure and notable efficacy. It is supplemented with Taohuochengqi Decoction — Zhang Zhongjing's classic formula for treating blood stasis in the lower jiao — to enhance its blood-stasis-resolving properties.

4.3 External Treatment Methods with Chinese Herbal Medicine

Beyond oral medication, external treatment methods in traditional Chinese medicine are also applied in CFR therapy, such as Chinese herbal colon dialysis and Chinese herbal enemas. Wang Huimin [23] summarized the treatment approach of renowned senior TCM practitioner Duan Guangtang, which includes Chinese herbal colon dialysis. This method belongs to the 'lowering method' and is suitable for chronic renal failure with excess syndrome or mixed deficiency-excess syndrome. Master Duan formulated Colon Dialysis Formulas No. 1 and No. 2: Formula No. 1 detoxifies, invigorates blood circulation, and clears intestinal turbidity, suitable for patients with heat, dampness, and obesity. Ingredients include rhubarb, salvia root, sophora flower, dandelion, oyster shell, and mirabilite. Formula No. 2 targets patients with cold and dampness patterns and emaciation, warming yang, promoting bowel movement, and expelling turbidity. Commonly selected herbs include rhubarb, salvia root, sophora flower, dandelion, oyster shell, and aconite. Additionally, herbal enemas are employed. Research by Shen Tao et al. [24] found that administering enemas three times weekly, spaced 2–3 days apart, using a formula of 30g salvia root, Carthamus tinctorius 30g, calcined oyster shell 30g, Astragalus membranaceus 30g, wine-processed Ligusticum chuanxiong 30g, wine-processed Rheum palmatum 50g. The study methodology involved administering Western medical basic treatment to 30 patients in the control group, while 90 patients in the experimental group received both Western medical basic treatment and Chinese herbal enema therapy. The experimental group demonstrated effective improvement in renal function indicators.

5. Integration of Traditional Chinese and Western Medicine

Modern scholars have achieved innovations and advancements in both diagnosis and treatment. In diagnosis, building upon traditional syndrome differentiation and classification, incorporating modern diagnostic indicators enhances the accuracy of pattern identification. Zhan Wenyuan and Zhang Junhua [25] compared serum Cr (creatinine), Cysc, and urinary β2MG levels among chronic renal failure patients with three syndrome patterns — liver-kidney yin deficiency, spleen-kidney yang deficiency, and qi-yin deficiency—and healthy controls. They found that patients with TCM syndrome classification for CRF exhibited significantly higher Cysc and β2MG concentrations than the normal group, in the following order: spleen-kidney yang deficiency > liver-kidney yin deficiency > qi-yin deficiency. β2-microglobulin levels were significantly higher than those in the normal group, in the following order: spleen-kidney yang deficiency syndrome > liver-kidney yin deficiency syndrome > qi-yin deficiency syndrome. Zou Chuan et al. [26] classified 87 non-dialysis chronic renal failure patients using TCM pattern differentiation into constitutional deficiency syndrome (including spleen-kidney qi deficiency syndrome, liver-kidney yin deficiency, spleen-kidney yang deficiency, and qi-yin deficiency) and symptomatic excess patterns (wet-turbidity, damp-heat, water-dampness, and blood stasis) based on primary manifestations. Serum creatinine (Cr), uric acid (UA), indole-3-carbinol sulfate (IS), and blood urea nitrogen (BUN) levels. Results indicate that patients with chronic renal failure (CFR) non-dialysis wet-heat syndrome exhibit significantly stronger correlations with serum Cr and IS levels than other excess patterns. This suggests that accumulation of these enterogenic uremic toxins primarily manifests as wet-heat patterns, providing clinical guidance for eliminating enterogenic toxins through syndrome differentiation and treatment. Regarding treatment, given the respective clinical advantages of Western and Chinese medicine, integrated approaches combining both have gained widespread application in recent years for managing CFR. This combined medication strategy provides foundational treatment by controlling proteinuria, blood pressure, blood lipids, and hemodialysis requirements, while also offering targeted Chinese medicine therapies tailored to the patient's etiology and constitution. This enhances improvement in clinical symptoms and inhibits disease progression in CFR. Among the aforementioned TCM therapeutic approaches, combined medication typically involves supplementing Western drugs with herbal extracts or formulas, alongside external treatments. For instance, Zhao Xianfeng [27] demonstrated through a clinical controlled trial that the Kidney Failure Formula not only alleviates clinical symptoms in early-stage chronic renal failure patients but also improves

renal function to varying degrees. Furthermore, its efficacy was enhanced when combined with benazepril. Li Xueqin et al. [28] conducted integrated Chinese and Western medicine treatment on 60 patients. The approach involved a low-protein, low-phosphorus diet to control blood pressure and correct water, electrolyte, and acid-base balance, supplemented with Jinshuibao and Chinese herbal decoction therapy. After comparing clinical efficacy with 48 patients receiving Western medicine alone, they concluded that the integrated therapy group showed significant pre-treatment reductions in renal function markers (BUN, SCr, CCr) and increases in serum albumin (Alb) and hemoglobin (Hb).

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7. Conclusion

The treatment of chronic renal failure (CRF) is a comprehensive process that usually requires a combination of traditional Chinese and Western medicine to intervene in the etiology, complications, and overall condition. Western medicine treatment mainly focuses on controlling the cause, relieving symptoms, and delaying disease progression. TCM treatment emphasizes syndrome differentiation and treatment, and regulates the overall function by taking Chinese medicine orally, traditional Chinese patent medicines and simple preparations or external treatment. In conclusion, the combination of traditional Chinese medicine and Western medicine forms a complementary relationship, which is more conducive to the treatment and prognosis of diseases.

References

[1] Wu Shaochi. Clinical Efficacy Evaluation of the Qi-Regulating and Kidney-Supporting Formula in Treating Chronic Kidney Disease Stages 3-5 [D]. Ningxia Medical University, 2023.

[2] Lü Hongxia, Cui Siling. Risk Factor Analysis for Sepsis in Patients with Chronic Renal Failure [J]. Systems Medicine, 2023, 8(07): 95-98+103.

[3] Sun Wei. Approaches and Methods for Integrating Traditional Chinese and Western Medicine in Treating Chronic Renal Failure [C]//Chinese Association of Integrative Medicine, Nephrology Branch. Proceedings of the 2008 Nanjing Forum on Integrative Medicine in Nephrology. 2008:109-115.

[4] Wu Shumei, Liu Jinhui, Liu Lanying. Treatment Approach of Traditional Chinese Medicine for Chronic Renal Failure [J]. Journal of Rational Drug Use, 2015, 8(26): 141-142.

[5] National Kidney Foundation – K/DOQI. Clinical Practice Guidelines for Chronic Kidney Disease: Evaluation, Classification, and Stratification. Am J Kidney Dis, 2002, 39: S1–S266.

[6] Xu Yun. Clinical Experience of Professor Liu Baohou in Treating Chronic Renal Failure [J]. Chinese Journal of Integrative Medicine in Nephrology, 2004(07):376-378.

[7] Yang Jie, Xu Shuyan, Yang Fan et al. Effects of Benidipine on Hypertension and Proteinuria in Patients with Early Chronic Renal Failure [C]//Zhejiang Provincial Medical Association Nephrology Branch. Proceedings of the 2012 Zhejiang Provincial

Nephrology Academic Annual Meeting. [Publisher unknown], 2012:1.
[8] Fang Xingxing. Fluvastatin Combined with Ezetimibe in Treating Hyperlipidemia in Patients with Chronic Renal Failure [J]. Imaging Research and Medical Application, 2017, 1(01):176-177.
[9] Geng Yushan, Liu Xianhui, Zhao Na. Effects of Sacubitril/Valsartan Combined with Hemodialysis on Peripheral Serum Potassium and BNP in Patients with Chronic Renal Failure and Heart Failure [J]. Chinese Prescription Drugs, 2022, 20(04): 105-107.
[10] He Dong, Liao Jing. New Advances in Clinical Research on Peritoneal Dialysis [J]. Journal of Rational Drug Use, 2014, 7(35): 188-190.
[11] Niu Guangzhu. Study on the Effect of Microenvironment in Chronic Renal Failure on Kidney Development After Embryo Transfer [D]. Shandong University, 2019.
[12] Liang Xiaofang. Application Research of the Theory of Spleen and Stomach Qi Metabolism in Chronic Kidney Disease [D]. Jiangxi University of Chinese Medicine, 2022.
[13] Le Wenqing. Treatment of Chronic Kidney Disease Based on the Traditional Chinese Medicine Theory of 'Supporting Yang' [J]. Sichuan Journal of Traditional Chinese Medicine, 2022, 40(07): 35-37.
[14] Zhao Xianfeng. Summary of Guan Jianguo's Experience in Diagnosing and Treating Early and Middle-Stage Chronic Renal Failure [J]. Liaoning Journal of Traditional Chinese Medicine, 2014, 41 (09):1834-1836.
[15] Ma Xiaoyan, Xu Jingfang. Discussion on the Differentiation and Treatment Approach for Chronic Renal Failure Based on the Theory of Ascending and Descending Functions of the Spleen and Stomach [J]. Liaoning Journal of Traditional Chinese Medicine, 2010, 37(01): 82-83.
[16] He Liqun. Diagnosis, Pattern Differentiation Classification, and Efficacy Evaluation of Chronic Renal Failure (Trial Protocol). Shanghai Journal of Traditional Chinese Medicine, 2006, 40(8):8-9.
[17] Liu Xusheng, Liu Xinglie, Liu Minwen et al. Clinical Study on Distribution Characteristics of Traditional Chinese Medicine Syndromes in Chronic Renal Failure [J]. Shaanxi Journal of Traditional Chinese Medicine, 2007, 28(8): 964-968.
[18] Xu Daji, Sun Shengyun. Approaches and Insights into Integrated Traditional Chinese Medicine Treatment for Chronic Renal Failure [J]. Journal of Modern Chinese Medicine and Western Medicine, 2002, 11(20): 2081-2083.
[19] Standardization Project Group of Clinical Application Guidelines for Chinese Patent Medicines in Treating Priority Diseases. Clinical Application Guidelines for Chinese Patent Medicines in Treating Chronic Kidney Disease Stages 3-5 (Non-Dialysis) (2020) [J]. Journal of Chinese Medicine and Western Medicine, 2021, 41(03): 261-272.
[20] Li Xichun, Li Weidong. Efficacy Observation of Cynanchum Atratum Injection in Chronic Renal Failure Without Renal Replacement Therapy [J]. Journal of Ningxia Medicine, 2012, 34(10): 1053-1054.
[21] Shi, M. Xue. Clinical observation of Zhenwu Decoction and Wensple Decoction in treating chronic renal failure [J]. Modern Distance Education of Traditional Chinese Medicine in China, 2021, 19(11): 94-96.
[22] Zhao, T., Gao, J. N., Liu, S. Y. Summary of Professor Gao Jining's experience in treating chronic renal failure with classical formulas [J]. Chinese Journal of Modern Distance Education in Traditional Chinese Medicine, 2018, 16(02): 74-75.
[23] Wang Huimin. Clinical Experience Summary of Renowned TCM Physician Duan Guangtang in Treating Chronic Renal Failure [J]. Chinese Journal of Integrative Medicine in Nephrology, 2019, 20(02): 150-151.
[24] Wang Hebao, Hu Fang, Yu Songren. Overview of Traditional Chinese Medicine Pattern Differentiation in Chronic Renal Failure [J]. Jiangxi Journal of Traditional Chinese Medicine, 2020, 51(01): 72-74.
[25] Zhan Wenyan, Zhang Junhua. Correlation Study between Traditional Chinese Medicine Pattern Differentiation and Changes in Cystatin C and β2-Microglobulin in Patients with Chronic Renal Failure [J]. Chinese Prescription Drugs, 2017, 15(10): 127-128.
[26] Zou Chuan, Wu Yuchi, Deng Lili et al. Study on the Relationship between Traditional Chinese Medicine Syndrome Patterns and Serum Enterogenic Urotoxins in Patients with Chronic Renal Failure [J]. New Chinese Medicine, 2012, 44(01): 46-48.
[27] Zhao Xianfeng. Observation on the Efficacy of Kidney Failure Formula in the Prevention and Treatment of Early Chronic Renal Failure [J]. Journal of Modern Chinese-Western Medicine Integration, 2017, 26(14): 1486-1490.
[28] Li Xueqin, Gao Ming, Wang Xiaojun. Clinical Observation on Integrated Chinese and Western Medicine Treatment for Chronic Renal Failure [J]. Chinese Journal of Modern Drug Application, 2009, 3(20): 152-153.