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Clinical Observation on Treatment of Diabetic Nephropathy with Qihuang Gushen Mixture

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Abstract: *Objective:* To analyze the effect of Qihuang Gushen Mixture in the treatment of diabetic nephropathy. *Methods:* From June 2024 to May 2025, 60 patients with diabetic nephropathy were selected for data analysis in the hospital. All patients were divided into two groups using computer random allocation, with 30 patients in each group. The control group was treated with basic Western medicine treatment, while the experimental group was treated with Qihuang Gushen mixture + basic Western medicine treatment. Different treatment effects were observed, and the application value was comparatively analyzed. *Results:* After treatment, the experimental group was better than the control group in terms of clinical efficacy, renal function indicators, and TCM syndrome improvement, and blood sugar control was more obvious ($P<0.05$). *Conclusion:* The treatment of diabetic nephropathy with Qihuang Gushen Mixture can significantly improve the clinical efficacy. It can further improve clinical symptoms on the basis of conventional Western medicine treatment, promote the recovery of renal function, improve the scores of TCM sequelae, and is more conducive to the recovery of the disease. It is worthy of reference.

Keywords: Qihuang Gushen mixture; Diabetic nephropathy; Clinical efficacy; TCM symptom score

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1. Introduction

The occurrence of diabetes is closely related to heredity, obesity, lifestyle, etc. With the development of society, people's material living standards have gradually improved, and phenomena such as overnutrition and lack of exercise have become more serious, leading to a gradual increase in the incidence of diabetes. Diabetic nephropathy, a common microvascular complication of diabetes, has a high incidence rate and is the main factor leading to end-stage renal disease. The course of the disease is insidious, and there are no typical clinical manifestations in the early stage. As the disease progresses, patients will develop proteinuria, edema, progressive decline in renal function, etc., and their quality of life will be seriously reduced [1]. Therefore, it is crucial to follow up treatment plans in a timely manner to improve the long-term prognosis of diabetic nephropathy. In the past, basic Western medicine treatments such as controlling blood sugar, blood pressure, and improving microcirculation were mainly used in the clinical treatment of patients with diabetic nephropathy. Although they can delay the progression of the patient's condition, they cannot fundamentally improve the patient's renal function. The long-term treatment effect is limited, and there are certain limitations. In addition, some patients are prone to adverse reactions after long-term medication, and treatment compliance is affected. Traditional Chinese medicine

believes that diabetic nephropathy belongs to the category of "quenching thirst" and "kidney failure" [2]. Deficiency of the spleen and kidneys, blood stasis, and internal dampness and turbidity are the core pathogenesis. According to the characteristics of this disease, warming yang and strengthening the spleen, assisting yang and transforming qi, diluting water, and reducing swelling are considered important treatment principles. The clinical study of Qihuang Gushen Mixture, whose main traditional Chinese medicine ingredients are astragalus, poria, etc., has the functions of replenishing qi and strengthening the spleen, activating blood circulation and removing blood stasis, and strengthening the kidney and clearing turbidity, which is consistent with the pathogenesis of diabetic nephropathy [3]. Therefore, this study carried out relevant data analysis, selected 60 patients, and evaluated the therapeutic effects of different treatment options, in order to lay a foundation for the prevention and treatment of diabetic nephropathy.

2. Materials and methods

2.1. Clinical data

This article uses a retrospective analysis method to select 60 patients with diabetic nephropathy from the hospital from June 2024 to May 2025 for data analysis. All patients are divided into two groups using computer random allocation, with 30 patients in each group. The experimental group consisted of 16 men and 14 women, and the age range was between 45 and 78 years old, with a mean value of 59.36±5.25 years old. The control group was 17 men and 13 women, and the age range showed that it ranged from 42 to 77 years old, with a mean value of 59.31±5.24 years old. Comparing the basic information of the two groups of patients, $P>0.05$.

Inclusion criteria: (1) Meet the diagnostic criteria for diabetic nephropathy; (2) No allergic reactions to the drugs used in this study; (3) Sign an informed consent form.

Exclusion criteria: (1) Patients with severe cardiovascular and cerebrovascular diseases, mental disorders, and cognitive dysfunction; (2) Primary and other secondary kidney diseases; (3) Mental illness or inability to cooperate with treatment.

2.2. Method

The control group received basic treatment with Western medicine, taking 1 (30 mg) nifedipine controlled-release tablet orally once a day, 1 (30 mg) pioglitazone hydrochloride tablet once a day, 1 tablet (10 mg) atorvastatin calcium tablet once a day, for 3 consecutive months.

The experimental group was treated with Qihuang Gushen mixture + basic Western medicine treatment. The conventional Western medicine treatment plan was the same as that of the control group, and at the same time, the self-prepared Jianshen mixture was added. The prescription consisted of: 20 g of marshmallow flowers, 15g each of astragalus, poria, gorgon fruit, locust, ligustrum lucidum, red peony root, Dipsacus bark, and diffusa diffusa, 10g each of angelica, atractylodes, dangshen, ghost arrow feather, zombie silkworm, and burdock, and 6g of cicada slough. All medicines are uniformly decoctioned by the hospital's Chinese medicine pharmacy, and 100 ml is taken every morning 60 minutes before fasting, and another 100 ml 60 minutes before dinner. The continuous treatment period is 3 months.

2.3. Observation indicators

(1) Compare the renal function indicators between the two groups, such as serum creatinine (Scr), urinary microalbumin excretion rate (UAER), and urea nitrogen (BUN).

(2) Compare the blood sugar indicators of the two groups. The patients' fasting blood glucose (FPG) and 2-hour postprandial blood glucose (2hPG) were measured before and after treatment.

(3) Compare the TCM syndrome scores between the two groups. Referring to the "Guiding Principles for Clinical Research of New Traditional Chinese Medicines", the patients' TCM syndromes (such as fatigue, shortness of breath, laziness, soreness in the back and knees, edema, etc.) were scored. The scores were scored as 0, 2,

4, and 6, respectively, according to the severity of the symptoms. The higher the score, the more severe the symptoms.

(4) Compare the total treatment effectiveness of the two groups. After treatment, if the urinary albumin excretion rate returns to normal and the signs and symptoms are reduced by more than 50%, it is judged to be effective; if the urinary albumin excretion rate and signs and symptoms are reduced by 30%–50%, it is judged to be effective; in other cases, it is judged to be ineffective. Total efficiency = 100% - inefficiency.

2.4. Statistical analysis

Data statistics were carried out with SPSS 28.0 software. The measurement data expression method is: Mean ± SD, and the count data expression method is: %. The t and x^2 tests between groups were tested, respectively. $P<0.05$ indicates the difference is statistically significant.

3. Results

3.1. Comparison of renal function indicators between the two groups before and after treatment

Before treatment, there was no significant difference in renal function-related indicators between the two groups of patients, $P>0.05$; after treatment, patients in the experimental group improved more significantly in indicators related to renal function, such as Scr, UAER, and BUN ($P<0.05$), as shown in **Table 1**.

Table 1. Comparison of renal function indicators between the two groups (Mean ± SD)

Group	Scr (μmol/L)		UAER (μg/min)		BUN (mmol/L)	
	Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment
Experimental group (n=30)	114.18±22.02	60.17±16.48	102.27±25.58	60.18±15.42	8.54±2.05	3.88±0.58
Control group (n=30)	114.06±21.44	80.44±18.22	102.11±25.47	79.26±20.55	8.68±2.14	6.02±1.44
t	0.0214	4.5191	0.0243	4.0676	0.2588	7.5503
P	>0.05	<0.05	>0.05	<0.05	>0.05	<0.05

3.2. Comparison of blood glucose indicators between the two groups before and after treatment

Before treatment, there was little difference in blood glucose indicators between the two groups of patients, $P>0.05$; after treatment, the decrease in FPG and 2hPG indicators in the experimental group was significantly greater than that of the control group, $P<0.05$, as shown in **Table 2**.

Table 2. Comparison of inflammatory response indicators between the two groups (Mean ± SD)

Group	FPG (mmol/L)		2hPG (mmol/L)	
	Before treatment	After treatment	Before treatment	After treatment
Experimental group (n=30)	9.54±1.35	6.32±1.08	13.58±2.62	8.44±1.52
Control group (n=30)	9.62±1.26	7.86±1.25	13.49±2.55	10.22±1.87
t	0.2373	5.1061	0.1348	4.0457
P	>0.05	<0.05	>0.05	<0.05

3.3. Comparison of TCM syndrome scores between the two groups before and after treatment

Before treatment, there was little difference in TCM syndrome scores between the two groups of patients, $P>0.05$; after treatment, the TCM syndrome scores of the patients in the experimental group were better, and the difference was significant ($P<0.05$), as shown in **Table 3**.

Table 3. Comparison of TCM syndrome scores between the two groups (Mean ± SD)

Group	n	TCM syndrome score	
		Before treatment	After treatment
Experimental group	30	12.65±3.82	4.85±1.57
Control group	30	12.58±3.66	7.24±2.05
t	-	0.0725	5.0697
P	-	>0.05	<0.05

3.4. Comparison of clinical efficacy between the two groups

Compared with the control group, the total effective rate of treatment in the experimental group was significantly higher, according to statistical comparison ($P<0.05$), as shown in **Table 4**.

Table 4. Comparison of the total effective rate of treatment between the two groups (n/%)

Group	n	Effective	Valid	Invalid	Always efficient
Experimental group	30	18 (60.00)	10 (33.33)	2 (6.67)	28 (93.33)
Control group	30	10 (33.33)	11 (36.67)	9 (30.00)	21 (70.00)
x^2	-	-	-	-	5.4545
P	-	-	-	-	<0.05

4. Discussion

Diabetic nephropathy is very harmful, and the pathological process involves glucose metabolism disorder, inflammation activation, oxidative stress imbalance, renal microcirculation disorder, etc. Affected by many factors, patients will have an irreversible decrease in glomerular filtration function [4]. Therefore, early prevention and treatment of diabetic nephropathy is very important. Western medicine believes that diabetic nephropathy is a syndrome caused by a variety of kidney diseases. Patients are accompanied by symptoms such as hypoalbuminemia, edema, and proteinuria. Basic Western medicine treatment is used for patients. It has a limited effect in repairing the patient's damaged kidney tissue and cannot block the progression of the patient's disease. However, long-term drug treatment is highly dependent, showing certain application drawbacks [5]. According to the analysis from the perspective of traditional Chinese medicine, nephrotic syndrome is classified into categories such as kidney wind, urinary turbidity, edema, and low back pain, involving syndrome types such as Feng Shui, dampness and heat, lung heat and yin deficiency, spleen and kidney yang deficiency, etc. [6]. Diabetic nephropathy is treated based on "deficiency of the spleen and kidneys and internal obstruction of dampness and blood stasis." This treatment method proposes the failure of clear yang to rise, the accumulation of turbid poison, and wind evil disturbing the collaterals as the core pathogenesis. The patient's spleen deficiency causes proteinuria, and the patient's turbidity and poison stop internally, which is manifested as an increase in creatinine level. Qufeng and dredging the collaterals, based on the fact that wind evil enters the collaterals and manifests as proteinuria fluctuations,

expands the theoretical extension of wind evil causing nephropathy and provides a basis for traditional Chinese medicine treatment. Traditional Chinese medicine relies on the advantages of overall syndrome differentiation and treatment to carry out treatment that takes into account the core pathogenesis of diabetic nephropathy and has achieved remarkable results. Clinical research shows that Qihuang Gushen Mixture, combined with the patient's pathogenesis, can help the patient replenish qi and strengthen the spleen, activate blood circulation and remove blood stasis, strengthen the kidney and relieve turbidity, and significantly improve the patient's renal function and other indicators.

In this article, 60 patients admitted to the hospital were provided with different treatment plans, and the different clinical indicators of the patients were judged to evaluate the treatment effects of the patients. The results of this study show that after treatment, core renal function indicators such as Scr, UAER, and BUN in the experimental group were significantly lower than those in the control group (P<0.05). The results confirmed that patients using Qihuang Gushen Mixture and basic Western medicine treatment can achieve a synergistic effect and play a certain role in delaying the progression of renal function damage. Clinical studies have concluded that glomerular mesangial cells proliferate abnormally in a hyperglycemic environment, the basement membrane thickens, the integrity of the filtration barrier is destroyed, and the patient's renal function indicators are abnormal [7]. After the patient is administered Qihuang Gushen Mixture, multi-drug synergy can be achieved with targeted repair effects. Althea flowers and *Hedyotis diffusa* have clear diuretic, anti-inflammatory, and anti-fibrotic effects, which can help reduce renal interstitial damage and delay glomerulosclerosis, thereby possibly improving the glomerular filtration rate and reducing Scr and BUN levels. Astragalus, Codonopsis, Poria, and Atractylodes replenish qi and strengthen the spleen, and combined with Poria and Gorgon to remove dampness and solidify essence, they can enhance the body's metabolic function and promote toxin excretion. Locust, Dipsacus, *Ligustrum lucidum*, and Gorgon nourish kidney yin and kidney yang, absorb subtle substances, and reduce protein leakage based on the theory of traditional Chinese medicine. *Angelica sinensis*, red peony root, and Gui Jianyu can activate blood circulation and remove blood stasis, which can improve glomerular microcirculation, reduce intraglomerular high pressure and hyperfiltration, and reduce capillary wall damage. *Bombyx mori*, cicada slough, and burdock have the effects of dispelling wind and dredging collaterals, anti-allergy, and anti-inflammatory. They can stabilize the glomerular basement membrane, reduce its permeability, and directly target the production of proteinuria.

In terms of blood sugar indicators, the fasting blood sugar and 2-hour postprandial blood sugar levels of the experimental group were lower than those of the control group (P<0.05). The results confirmed that patients using Qihuang Gushen Mixture combined with conventional Western medicine treatment can more effectively improve the blood sugar levels of patients with diabetic nephropathy. Astragalus, Atractylodes, Poria, Gui Jianyu, and other drugs can improve insulin resistance and enhance the utilization of glucose by peripheral tissues. By replenishing qi and nourishing yin (astragalus, *Ligustrum lucidum*), strengthening the spleen and kidneys, and regulating the metabolic state of the whole body, it lays the foundation for long-term stable control of blood sugar, which is a "root cause" strategy.

In terms of TCM syndrome scores, the scores of the experimental group after treatment were lower than those of the control group (P<0.05). This shows that astragalus combined with conventional western medicine treatment can effectively relieve patients' fatigue, shortness of breath, laziness, backache, and knee weakness, edema, and other TCM syndromes. The prescription contains *Astragalus membranaceus*, *Codonopsis pilosula*, *Atractylodes macrocephala*, and *Poria cocos* to improve symptoms such as fatigue, shortness of breath, and anorexia. Lorips, Dipsacus, and *Ligustrum lucidum* can improve symptoms of kidney deficiency, such as soreness and weakness in the waist and knees, dizziness, and tinnitus. *Angelica sinensis*, red peony root, ghost arrow feather, and bamboo silkworm are used for blood stasis syndromes such as dull complexion and dark purple tongue. Althea flowers, *Hedyotis diffusa*, and burdock seeds can help remove damp-heat poisons and improve dry mouth, greasy coating, and other symptoms. Taken together, this prescription can comprehensively and significantly reduce patients' TCM syndrome scores and improve their quality of life.

Analysis of the clinical efficacy showed that the total effective rate of the experimental group was 93.33%, which was significantly higher than that of the control group (P<0.05), confirming the significant advantages of combined treatment. Through the collaboration of traditional Chinese and Western medicine, the symptoms and root causes can be treated

simultaneously. Among them, basic treatment with Western medicine can quickly control risk factors such as blood sugar, blood pressure, and blood lipids, and stabilize the patient's blood sugar, blood pressure, and blood lipids. In the process of using Qihuang Gushen Mixture for patients to stabilize the internal environment, it can replenish qi and strengthen the spleen, activate blood circulation and remove blood stasis, strengthen the kidneys and relieve turbidity, repair kidney tissue, and enhance the body's regulatory ability. At the same time, multiple targets can inhibit the patient's inflammation, regulate oxidative stress, and block the pathological process [8].

The combined application of Qihuang Gushen Mixture and Western medicine can quickly relieve patient symptoms, effectively control blood sugar, and protect renal function through Western medicine. The use of traditional Chinese medicine can treat both the symptoms and the root cause, which is more conducive to the improvement of clinical efficacy. The improvement of TCM sequelae scores provides an effective method for the treatment of early diabetic nephropathy. However, this study has certain limitations. In traditional Chinese medicine treatment, syndrome differentiation and treatment are carried out for patients. The cases in this study are consistent with specific syndrome types. Pay attention to strict syndrome differentiation during clinical application. Diabetic nephropathy has a long course, and long-term and large-sample follow-up is still needed to verify the long-term efficacy of Qihuang Gushen Mixture. The mixture used in the long-term research on Qihuang Gushen Mixture is a compound preparation, and the action targets and synergistic mechanisms of each component have not yet been clarified for further exploration. The sample size of this study is limited; it is a single-center study, and the extrapolation of the results is limited. Multi-center, large-sample studies for patients need to be carried out in the future.

In summary, the treatment of diabetic nephropathy with Qihuang Gushen Mixture is ideal. It can effectively improve the patient's renal function and blood sugar level, while significantly alleviating the manifestations of related TCM syndromes. The overall efficacy is better than that of simple Western medicine treatment, and it is worthy of clinical use and promotion.

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Disclosure statement

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References

[1] Yuan Y, Lu JF, Zhao J, et al., 2023, Research on the Clinical Efficacy of Qihuang Jiangtang Hushen Recipe in the Treatment of Diabetic Nephropathy and Its Delaying Effect on Renal Function Damage. *Chinese Journal of Traditional Chinese Medicine*, 41(1): 35–38.

[2] Han JR, Wang XY, Zhu Q, et al., 2025, Qihuang Gushen Tongluo Recipe Regulates Lipid Metabolism and Autophagy to Protect Podocytes in the Treatment of Diabetic Nephropathy. *World Traditional Chinese Medicine*, 20(11): 1862–1873.

[3] Guan YR, Wang Y, Liu X, et al., 2025, Overview of Research on the Regulatory Effects of Traditional Chinese Medicine

on Signaling Pathways in Diabetic Nephropathy. *China Traditional Chinese Medicine Science and Technology*, 32(3): 574–578.

[4] Chen JH, 2025, Effect of Qihuang Gushen Tongluo Recipe on the Degree of Renal Damage and Oxidative Stress Indicators in Patients with Diabetic Nephropathy. *Inner Mongolia Traditional Chinese Medicine*, 44(2): 12–14.

[5] Chen JH, Yang SJ, Xu T, et al., 2023, Research Progress on the Effects of Traditional Chinese Medicine on the Nrf2/HO-1 Signaling Pathway in Diabetic Nephropathy. *Modern Hospital*, 23(4): 652–656.

[6] Li J, Zhao W, Meng XX, et al., 2023, Research on Modified Qihuang Drink Delaying Diabetic Nephropathy by Reducing Mitochondrial Damage. *Journal of Liaoning University of Traditional Chinese Medicine*, 25(4): 17–21 + 221.

[7] Li XB, Pang XX, Peng ZN, et al., 2024, Research on Qihuang Gushen Tongluo Prescription in the Treatment of Diabetic Nephropathy Based on Bioinformatics and Animal Experiments. *World Traditional Chinese Medicine*, 19(5): 615–622.

[8] Wu LY, Mao KF, Xie DD, et al., 2024, Research on the PTEN/PI3K/Akt/mTOR Pathway Mechanism of Modified Qihuang Decoction in Improving Diabetic Nephropathy. *Shenzhen Journal of Integrated Traditional Chinese and Western Medicine*, 34(7): 4–8 + 137–138.