

The Treatment of Diabetic Nephropathy with the Method of "Benefitting the Kidney and Consolidating Essence"

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Abstract: Diabetic nephropathy is equivalent to "thirst disease" in Chinese medicine, and the further development of diabetic patients will inevitably lead to kidney damage, so that diabetic nephropathy is the most important complication of diabetes. Diabetic nephropathy is a complex disease with many complications, and the lesions involve the five viscera. According to Zhang Jingyue, other internal diseases will injure the kidneys if they are prolonged, so the key to clinical treatment should be "kidney deficiency", which will lead to proteinuria and glomerulosclerosis and a gradual decrease in glomerular filtration rate. In this paper, we refer to ancient and modern Chinese medical texts, collect a large amount of literature, and start from the identification of internal organs in Chinese medicine, combining "theory tracing - etiology and pathogenesis - diagnosis and treatment" into one, and combining with typical cases, we talk about the treatment of diabetic nephropathy by "Yi kidney consolidation method", hoping that it can We hope that it can help the clinical treatment effect of Chinese medicine in diabetic nephropathy.

1. Theoretical Traceability

The most common and serious complication of diabetes is Diabetic Nephropathy (DN). Prolonged diabetic nephropathy leads to proteinuria, a gradual decrease in glomerular filtration rate and microvascular lesions in the kidneys, a condition often referred to as diabetic glomerulosclerosis[1,2]. The disease is often referred to as diabetic glomerulosclerosis. The disease has a long duration and many symptoms, and is also one of the main causes of death in patients with Diabetes Mellitus (DM). Modern medicine is mainly through lowering sugar, blood pressure, blood lipids, control diet, restrict protein intake to improve DN symptoms, symptomatic treatment, prevention of other complications, but can not effectively cure the symptoms, affecting the effectiveness of treatment[3]. However, it is not effective to cure the symptoms and affect the treatment effect. The disease belongs to Chinese medicine "thirst" and its variants, after the Ming and Qing dynasties, Chinese medicine on the understanding of thirst theory and diagnosis and treatment experience gradually enriched, so far the modern Chinese medicine on thirst treatment and prescriptions have become mature, with in-depth research and significant efficacy, the main consideration of the disease mechanism for the congenital deficiency of endowment, or addiction to

fat, sweet and thick taste, or emotional disorders, or The main consideration is that the cause of the disease is a deficiency of congenital endowment, or a taste for fatty, sweet, and rich foods, or a disorder of emotion, or excessive exertion, which depletes the kidney essence and leads to the growth of internal deficiency fire[4,5]. The result is the development of abdominal thirst. The disease is complicated and prolonged, with a wide range of complications, and it is easy to change the evidence, and the disease injures the five viscera[6]. The kidneys are not nourished and the kidneys are not able to control their function, so proteinuria is likely to appear. Therefore, the key pathological factor of "kidney deficiency" is the main focus of the clinical treatment of this disease.

DN is the most serious small vascular disease among the complications of diabetes, and is the main cause of kidney loss in late diabetic nephropathy. The mechanism of its occurrence is mainly the long-term chronic diabetes that leads to an increase in glomerular filtration rate and a continuous increase in urine protein, causing changes in the glomerular capillaries, small artery walls, glomeruli and renal interstitium, etc., accompanied by edema, increased blood pressure, renal hypofunction and other manifestations of a type of disease[7-9]. The disease is characterized by oedema, high blood pressure, and renal hypofunction. Although there is no clear definition of "diabetic nephropathy" in Chinese medicine, the disease can also be classified as "thirst and edema" in Chinese medicine, and its location is closely related to the lung, stomach and kidney organs, mainly in the kidney. Zhongjing proposed in "The Essentials of the Golden Horoscope" that stomach heat and kidney deficiency are the main pathogenesis of thirst, and first treated it with Baihu plus ginseng soup and kidney qi pills, which have been used to this day, providing the theoretical basis for the clinical treatment of thirst from the kidney in later times[10]. It has provided the theoretical basis for later clinical treatment of thirst from the kidney.

The "Medical Zong Zhi Zhi" suggests that "the disease of thirst is in the kidney...", the lung fire and stomach fire are ultimately attributed to the deficiency of kidney yin, and the deficiency of yin will lead to fire, the kidney loses moistening, the function of the kidney is damaged, the water and grain essence comes out with the urine, so the urine tastes sweet. Because the kidney is the root of the congenital, other organs are sick for a long time, no less than the kidney, and combined with the key factors of the lesion of thirst viscera and "kidney deficiency" closely, so in the treatment is often based on the kidney[11,12]. Therefore, the treatment is often based on the kidney. Modern medicine believes that DN is closely related to endocrine and genetic aspects, similar to the theory that "kidney deficiency" is the core pathogenesis of DN in Chinese medicine, and both believe that its occurrence is related to "kidney"[13,14]. Both believe that its occurrence is related to the kidney. Therefore, it is very important to treat DN from the kidney, which coincides with the theory that "thirst is based on the kidney"[15]. This is in line with the theory that "thirst is based on the kidney". In this paper, we discuss the treatment of diabetic nephropathy with the method of "benefitting the kidney and fixing the essence", hoping to provide a clinical reference for the future treatment of diabetic nephropathy with Chinese medicine.

2. Etiology and Pathogenesis

The typical symptoms of DN are "three more, one less, and sweet-smelling urine", etc. As the disease progresses, the vital organs and blood gradually decline, the spleen and kidneys become insufficient, water-dampness does not transform and overflows into the skin, and edema and deficiency labor easily appear. Insufficient kidney yin will easily lead to internal deficiency fire, which will be burnt to the heart and lungs and manifest as irritable thirst and excessive drinking; deficiency of the spleen and kidney will lead to internal dampness and heat, which will easily lead to stomach heat and elimination of grain, manifesting as excessive drinking; deficiency of the spleen and kidney will lead to weakness of qi-transformation in the middle jiao, which will lead to

edema of both lower limbs and deficiency labor[16-18]. The core pathogenesis of DN is yin deficiency and dry heat, and yin deficiency and dry heat are causally related to each other. The core pathogenic mechanism is yin deficiency and dry heat, and the relationship between yin deficiency and dry heat is causal[19,20]. In the beginning, the disease is characterized by dryness and heat, and in the long term, the disease is characterized by Yin deficiency, dryness and heat or kidney Yin deficiency. Since this disease is mostly a variation of thirst and has a long course, attention should be paid to distinguish this disease from complications, and actively treat and prevent and control the disease to avoid many complications[21]. Therefore, we should also pay attention to the differentiation between this disease and its complications, and actively treat and control it to avoid many complications.

3. Discriminatory Treatment

Since the clinical symptoms of DN are often similar to those of diabetes, its manifestation is still based on the "three more and one less" of diabetes as its main symptom, and because of the different degrees of remission and different positioning of the internal organs, it can be divided into "upper elimination, middle elimination and lower elimination", namely "lung dryness, stomach heat, kidney deficiency". In clinical practice, if "lung dryness" is the main symptom, the main manifestation is excessive drinking, so it is called "upper elimination"; if "stomach heat" is the main symptom, the main manifestation is excessive eating and easy hunger, that is "If the main symptom is "kidney deficiency" and the main symptom is polyuria, it is called "lower elimination". The disease generally has a long course, and "Yin deficiency" and "Yin deficiency and dry heat together" are most common in clinical evidence[22,23]. Therefore, it is important to pay attention to the treatment of the disease. Therefore, in the diagnosis and treatment of the disease, we pay attention to the concept of prevention before the disease and prevention of changes in the existing disease, pay attention to the key pathological factor of "kidney deficiency", and accompany the treatment of DN with the method of "benefitting kidney and consolidating essence"[24]. The treatment of "strengthening the kidney and essence" is always accompanied by DN.

Combined with ancient texts and literature, it is easy to see that medical practitioners of all generations have generally attached importance to the treatment of "tonifying the kidney". Jing Yue Quan Shu records:"The three elimination evidence, none of which is not due to the vital gate ... so that the source of the spring does not nourish." In the diagnosis and treatment, it is considered that "deficiency of the vital gate and deficiency of kidney yang" is the main mechanism of the disease, so the treatment is based on "Right Return Drink, Right Return Pill and Six Flavored Dihuang Pill"[25]. Therefore, the treatment is mainly based on "Yugui drink, Yugui pill and Liuwei Dihuang pill". Zhao Xianke's "Medical Guan" also believes that the treatment of thirst does not need to be divided into upper, middle and lower extinction, and that the treatment of kidney is fundamental. Therefore, it is very important to seize the key factor of "kidney deficiency" and treat DN from the "kidney".

This formula is a famous formula for tonifying the kidney and combining tonics and diarrhea, and is used for kidney yin deficiency caused by various factors[26]. This formula is used in the treatment of kidney yin deficiency caused by various factors. If the internal heat and fluid of Yin deficiency is scorched, it will hinder the blood flow and lead to blood stasis, so we can add motherwort, safflower and hawthorn to invigorate the blood and remove stasis, nourish Yin and clear heat."In addition, we add Gui Zhi and Fructus Pulchelli in the formula to warm Yang, transform Qi and nourish Kidney Yang, which is called "Jin Gui Kidney Qi Pill". In addition, because the elderly have insulin resistance and lack of insulin secretion, when using insulin for a long period of time, it can be combined with the oral administration of Liu Wei Di Huang Wan to

benefit the kidney and nourish yin to achieve the effect of both the symptoms and the root cause. Professor Li Yuqi[27] also believes that "since the cause of thirst is Yin deficiency and dryness, we should not attack the patient with a fierce attack, which will further deplete the fluid and help dryness; we should not use pungent and warm medicines, which will injure the fluid; we should not use too many blood activating medicines, which will damage the qi and blood and aggravate internal dryness; we should not use too many bitter and cold medicines, which will help the evil to defeat the stomach". Therefore, in clinical treatment, we not only focus on the method of benefiting the kidney and consolidating the essence, but also take into account other concurrent diseases.

On the one hand, it is used to benefit the kidney and consolidate essence, on the other hand, it is used in the treatment of DN with the modern pharmacological research to lower blood sugar and glycated hemoglobin, improve kidney function, antioxidant, inhibit aldose reductase activity, avoid glomerular and reduce kidney damage[28,29]. It is also used for the treatment of glucose and glycohemoglobin, improving renal function, antioxidant, inhibiting aldose reductase activity, avoiding glomerulopathy and reducing renal damage. Du Tianzhi[30]. By observing the clinical effects of the treatment of 72 cases of type 2 diabetes mellitus (deficiency of kidney yin) with the addition of Liu Wei Di Huang Tang, it was concluded that the symptoms of frequent urination, excessive urination, heart trouble, insomnia, heat in the hands and feet, physical weakness, thirst and induced drinking improved significantly after the treatment with this formula. Shi Li-Yu[31]. Through the observation of 64 DN patients, it was found that the efficiency rate after treatment with tonifying kidney Yi-Qi Tang combined with Liu Wei Di Huang Wan plus reduction reached 96.88%, which was significantly higher than that of the conventional treatment group 78.13%. Moreover, the urinary protein excretion rate and the reduction of Chinese medicine symptoms score were significantly better than that of the control group after treatment with this formula, and the occurrence of adverse reactions was also significantly lower than that of the control group.

In summary, a large number of clinical cases and modern studies have confirmed that after treatment with the "kidney tonic" method, the basic formula represented by Liu Wei Di Huang Wan, the clinical symptoms of DN patients are significantly relieved, with few complications and good efficacy, which is conducive to promoting the excretion of urinary protein and worthy of wide clinical application.

4. Case Examples

Kong, female, 64 years old, was first diagnosed on September 13, 2020. She complained of "elevated blood glucose for more than 8 years and blurred vision in both eyes for more than 10 days", and her fasting blood glucose fluctuated from 10.5 to 11.5 mmol/L and 2h postprandial blood glucose fluctuated from 10.1 to 11.1 mmol/L. She is now taking oral "metformin extended-release tablets, glargine tablets" and subcutaneous injection of "arginine human insulin" to control her blood glucose. The blood glucose was controlled by oral "metformin extended-release tablets" and "glargine tablets", combined with subcutaneous injections of "arginine human insulin", and outpatient urine examination showed proteinuria (++) . His symptoms include: lethargy, fatigue, poor visual acuity, dizziness, dry mouth and throat, average appetite, occasional nausea, no swelling of both lower limbs, poor sleep at night, nocturnal urination 3~4 times, foamy, stool regulation, no significant change in body mass recently, red tongue with little fluid, white greasy coating, thin pulse. Western medicine diagnosis: diabetic nephropathy. Traditional Chinese medicine diagnosis: thirsty nephropathy, deficiency of kidney qi and yin, internal obstruction of phlegm and turbidity. Prescription: Radix Rehmanniae 20g, Cornu Cervi Pantotrichum 12g, Rhizoma Polygonati 15g, Poria 12g, Dan Pi 6g, Zeligia 9g, Fructus Chasteberry 15g, Fructus Lycii 15g, Atractylodes Macrocephalae 20g, Radix et Rhizoma Ginseng 12g, Cortex Phellodendron 10g, Perilla Stems 12g,

Dendrobium 16g, Semen Chrysanthemum 16g, Utriculariae 16g, Radix Macrocephalae 10g, Chrysanthemum 10g, Lotus 10g, Rhizoma Polygonati 5g. 14 doses, 1 dose daily, decoction with water 400mL, 200mL each time, divided into 2 warm doses in the morning and evening.

On September 30, the follow-up: fasting blood glucose: 7.6mmol/L, 2h postprandial blood glucose: 10.2mmol/L, complained of blurred vision and dry mouth symptoms significantly improved after taking the medication, tomorrow urine reduced to 3~4 times, foam also reduced than before, still sleep poorly at night and difficult to sleep, so the effect is not more prescription, on the basis of the above plus sour date palm 30g, Ganoderma lucidum 15g, followed by 7 doses. And told the patient to maintain regular habits, regulate diet, appropriate exercise. After the improvement of symptoms follow-up, the mental state after taking the medicine, blurred vision, dry mouth, foamy urine, sleepless nights and other symptoms significantly improved, monitoring fasting blood glucose average 5.8-6.8 mmol/L, 2h postprandial blood glucose fluctuations in 9.0-10.5 mmol/L[32]. The blood glucose fluctuated from 9.0 to 10.5 mmol/L in the 2h after meal.

Professor Bu Xianchun believes that the patient in this case is a middle-aged and elderly woman, who has been suffering from thirst for a long time, with weakening of the essence of the internal organs, deficiency of the kidneys and loss of solidity and astringency, loss of urinary control, and frequent urination. The deficiency of kidney yin does not help the heart yin to restrain the heart fire, so the heart and kidney do not intermingle, resulting in poor sleep at night. The treatment is to tonify the kidney, benefit the qi and nourish the yin. Combined with the concurrent phlegm and turbid internal obstruction, the treatment is to strengthen the spleen, dispel phlegm, brighten the eyes and calm the mind. At the same time, Dendrobium can cure the darkness of the eyes, Chrysanthemum can clear heat and brighten the eyes, Atractylodes macrocephala with Radix et Rhizoma Ginseng can strengthen the spleen, resolve dampness, nourish yin and clear heat, Perilla stems and Huang Lian can regulate the qi, Golden cherry can benefit the kidney and reduce urination, Lotus seed can benefit the kidney and nourish the heart, calm the mind and help sleep. In the second diagnosis, all the symptoms improved significantly, but the night sleep was still poor, so the effect of not changing the formula to keep the front, add sour date seeds, Ganoderma lucidum to benefit the heart and tranquilize the mind. In addition, Professor Bu believes that the affected DN is mostly elderly, due to its underlying diseases, the internal organs of the essence of the diminishing, the evidence is more complex, the clinical evidence is often mixed with a variety of evidence and see, so the clinical use of drugs should be mainly to nourish the deficiency, the emphasis on nourishing the kidney yin, restore the biochemical spleen, kidney function, the essence of the ascending, turbid toxins to descend, and according to the bias of the concurrent symptoms, the flexible addition of blood circulation to remove blood stasis, dampness and phlegm, diuretic and swelling, drain turbidity and open the ligaments. At the same time, the diagnosis and treatment of this disease should also focus on the combination of Chinese and Western medicine integrated therapy, Chinese medicine diagnosis and treatment combined with Western medicine hypoglycemic drugs to treat the patient, not only to effectively control blood sugar, but also to improve other related complications of DN, in order to delay the progress of the disease and promote healing.

5. Discussion

DN is a serious complication of diabetes mellitus due to unsatisfactory glycemic control and prolonged disease. It is believed that its development may be related to a variety of factors, such as genetics, abnormal metabolism due to hyperglycemia, DNA methylation, imbalance of glucose metabolism, etc. It may also be caused by the combination of certain genetic background and some risk factors[33]. It may also be caused by the combination of certain genetic background and some risk factors. Generally, the early treatment is to educate patients to understand the disease correctly,

through monitoring blood sugar, regular taking of hypoglycemic drugs, exercise, education and other symptomatic treatment, but in the late stage of Western medicine treatment, not only has limitations, incomplete treatment, recurrent disease and drug side effects, but also easy to make patients lose confidence in diagnosis and treatment, delaying treatment. Chinese medicine can make up for the shortcomings of Western medicine, with good treatment effect, no recurrence and obvious improvement of symptoms[34]. We are more familiar with the treatment of this disease and have a more mature treatment plan. First of all, we believe that the difference between the symptoms and the root cause of thirst disease is based on the deficiency of kidney yin, the loss of kidney moistening, the failure of kidney function, the loss of essence, resulting in dryness and heat as the symptoms, or the deficiency of kidney yin, the deficiency of fire on the lungs and stomach, resulting in thirst and excessive drinking, easy to eat and hunger, so the essence of DN treatment is to distinguish and identify. "Kidney deficiency is the basis". Therefore, the treatment of DN with the method of benefiting the kidney and consolidating essence is worthy of clinical reference and popular application, which can effectively relieve the clinical symptoms of patients, reduce the complications of Western medicine and make up for the deficiencies of Western medicine, and bring good news to DN patients.

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