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# Summary of Professor Song Zongliang's Experience in the Treatment of Type 2 Diabetes Mellitus with Yishen-Huoxue Prescription

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Abstract: In recent years, the incidence of diabetes has continued to increase, threatening our health more and more. However, western medicine treatment is dependent and has obvious side effects. In the long run, Chinese medicine treatment can significantly reduce and delay the appearance of complications and improve the quality of life of patients. Professor Song Zongliang believes that type 2 diabetes is due to the deficiency of the body and the kidney, the inability of qi to promote the blood vessels or the lack of blood due to the lack of yin, which leads to the blockage of blood stasis.; Clinical application of Yishen Huoxue Recipe with the addition and subtraction of the disease has often seen good results. I have learned a lot from my teacher and I have benefited a lot. The experience of Mr. Song in the treatment of type 2 diabetes is summarized as follows.

In recent years, with the change of people's life structure, diabetes has become one of the three most common chronic non-communicable diseases in the world. The prevalence of diabetes in people aged 18 years and above has reached 11.2%, of which type 2 diabetes accounts for more than 90%(Figure 1)[1].In western medicine, hypoglycemic drugs and insulin injections are commonly used to treat the disease, although it is possible to quickly reduce blood sugar, but there are many dependencies and adverse reactions, use for a long time, the relative deficiency in reducing complications, However, traditional Chinese medicine can take into account many people and pay attention to holistic treatment. While relieving complications, it can also make up for the patient's parity body deficiency and even improve immunity. Its side effects can be ignored and the body can better tolerate it, which further improves the quality of life of patients and is respected by increasingly people. Professor SONG Zongliang has been engaged in the clinical research and treatment of endocrinology of traditional Chinese medicine for more than 30 years. He has unique experience in the clinical treatment of diabetes. He is used to adding and subtracting the decoction of benefiting kidney and promoting blood circulation. The author has the honor to study under the tutor. Now, the special experience of Teacher Song in the treatment of diabetes by adding and subtracting the formula of nourishing kidney and activating blood is introduced as follows.

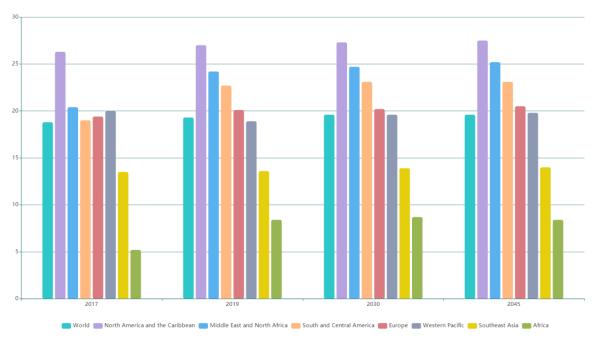


Figure 1: Incidence rate of diabetes (%).

### 1. Cause

Etiology of Diabetes belongs to the category of "thirst elimination" in traditional Chinese medicine. It was first recorded in Huainan Zi Shuoshan Xun in the early Han Dynasty: "If you marry a daughter and get rid of an illness, it is difficult to return to your husband after death" [2]. Clinical manifestations are often polydipsia, polyuria, polyeating, emaciation, and other typical symptoms (Figure 2). The causes of thirst disease are usually caused by external sensation, internal injury and endowment factors. According to Feng Xingzhong [3], the occurrence of diabetes is closely related to the liver, mainly due to Qi dysregulation and liver stagnation, and the main treatment is to soothe the liver and improve qi.Xiong Lihua [4] believed that spleen is the most closely related to diabetes among the five zang-organs, and spleen deficiency is the main one. Professor Song Zongliang thinks that the pathogenesis of thirst is more from the kidney, put forward to take the kidney as the key, kidney deficiency is the fundamental cause, and clearly pointed out the kidney in the pathogenesis of thirst."Lingshu Benzang" states: "If the kidney is brittle, it is good for the disease and the heat is eliminated" [5], and it was the earliest to point out the connection between kidney and thirst, so there were doctors who said "Diabetes is based on the kidneys" .Although diabetes can be divided into lung, stomach and kidney, it is fundamentally due to the deficiency of kidney qi. "Yi Guan ·On Thirst Reduction" said: "Therefore, the way to treat thirst reduction is not divided into upper, middle, and lower, and it is urgent to treat the kidney first." Wang Xingkuan[6] also proposed that diabetes mellitus is based on the loss of kidney essence. With the rapid development of modern society, the pace of life is accelerating and the competition is becoming increasingly fierce. For one thing, people generally have increased pressure, emotional disorder, body gi machine is not smooth, run disorder, depression and fire, gradually burning kidney Yin, and hair to quench thirst. Two, at present, the intensity of all walks of work is increasing, which more lead to people to worry about, dark consumption of blood, so that Yin jing deficit, kidney qi deficiency, hair for thirst. Third, contemporary people's life and rest are gradually unbalanced, excessive labor is also an important reason for kidney qi deficiency, kidney essence deficiency, So that the empty fire ingrown, the development of thirst. In addition, all diseases enter from the mouth. Young people's diets tend to be heavy, and they eat too much salty

and stewed things. There is a saying in "Lingshu Five Flavors": "Five flavors each go according to their preferences, the grain is sour, and the liver is the first... ... grains are pungent, go to the lungs first, grains are salty, go to the kidneys first." "Su Wen: Qi Tongtian Lun" also said: "The birth of Yin is originally in the five flavors, and the five palaces of yin are injured in the five flavors."[7] Salt can enter the kidneys and nourish them; however, too much salt also hurts the kidney, the kidney is salty first attack of the dirty, fire can warm the body, it can also burn the body. The diet is too salty to cause excessive overflow of body fluid in the veins, the blood is sticky, the veins are astringent, will hurt the kidney essence, the gasification is weak, the final qi deficiency blood stasis, become thirsty(Figure 3).

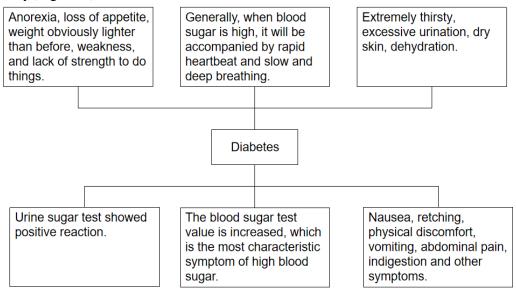


Figure 2: Expression of elevated blood sugar.

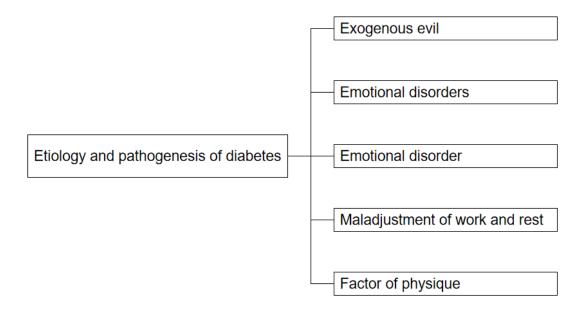


Figure 3: Etiology and pathogenesis of diabetes.

## 2. Pathogenesis

The kidney stores yin and yang, maintains the function of the whole body, and nourishes the organs and tissues of the five viscera and six fu organs. The dysfunction of the kidney is the essence of the pathogenesis of diabetes, and deficiency of the kidney is the key to the pathogenesis of diabetes., Kidney yin deficiency is also kidney deficiency. Among the five zang organs, only the kidney governs and stores the essence, and the yin essence of the kidney is the foundation of the yin fluid of the human body. Kidney is a water organ, which balances the metabolism of body fluids. If kidney yin is insufficient, it is difficult for kidney water to suppress the fire in the liver and kidney. If the fire is endogenous, the deficiency of yin will lead to excessive thirst. Form blood stasis. The kidney is the innate foundation, and even more the foundation of the zang-fu organs. If there is insufficient kidney qi in the body, the functions of the various zang-fu organs in the body will be relatively weakened. There is a saying in "Blood Syndrome Lung": "When blood stasis and thirst are thirsty, the origin of body fluid is the kidney water.... If there is blood stasis, qi is blocked by blood and cannot rise. To thirst."[8] Teacher Song believes that the basic pathogenesis of diabetes mellitus lies in kidney deficiency and blood stasis, deficiency of kidney qi, and depletion of kidney yin, then the viscera is deficient, the transport and transformation of subtle substances are abnormal, and then pathology such as blood stasis occurs. The product, stagnation of various viscera and even meridians and blood vessels, develops diabetes and thirst changes.

# 3. Medication Experience

Master Song believes that the treatment of diabetes should be mainly based on nourishing the kidney and consolidating the root, and supplemented by the methods of nourishing the kidney yin, nourishing qi, promoting blood circulation and removing blood stasis, and adding and subtracting the formula for nourishing the kidney and promoting blood circulation: astragalus, salvia, shengdi, pueraria, yam, motherwort, mountain Dogwood meat, Achyranthes pregnant, chicken Neijin, etc. (Figure 4). In the prescription, Astragalus is sweet in nature, slightly warm, and supplemented with yam, which has the effect of invigorating qi. Astragalus is the king drug, tonifying qi and diverting water and reducing swelling; yam is also used to nourish yin. Removing blood stasis, it can also benefit water; Pueraria lobata promotes body fluid and quenches thirst, so that body fluid can be distributed normally, and the spleen and stomach are clear and qi is raised; Scrophulariaceae nourishes yin, clears heat and purifies fire; Pueraria can accelerate the entry of glucose into liver cells to achieve the effect of lowering blood sugar [9]. Poria polysaccharides can effectively reduce the levels of blood sugar, glucagon, TG, and LDL, indicating that Poria polysaccharides can improve lipid metabolism disorders caused by diabetes to a certain extent [10]. Pharmacological studies have shown that Rehmannia glutinosa can improve islet β-cell function, reduce blood insulin resistance, regulate cellular glucose homeostasis, improve lipid metabolism disorders, and improve renal function. Liver injury has a protective effect [11]. Many medical studies have shown that Yishen Huoxue Recipe is highly effective in treating type 2 diabetes and can control blood sugar.

When Mr. Song added or subtracted from the symptoms, if the thirst was severe, add Trichosanthes and Ophiopogon japonicus; if the dampness and heat were severe, add Cortex Phellodendri and Coptidis; if the edema was severe, add Alisma, Poria, Polyporus; if the heat was excessive, add Jiaoshanzhi, Cortex Moutan; for those with high blood pressure, add Prunella vulgaris, cassia seed, and Tianma; for those with more nocturnal urination, add Dodder Seed, Jin Yingzi; for those with severe insomnia, add Polygala japonica and Suanzao Ren.

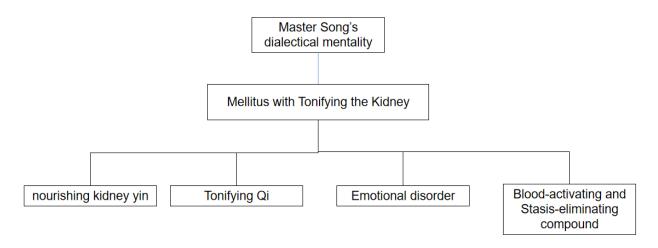


Figure 4: Basic dialectical thinking.

## 4. Pay Attention to Care

The aging of the modern population is becoming increasingly common, and the incidence of diabetes is also increasing year by year, which seriously affects our life and health. Therefore, the prevention of diabetes is particularly critical. In addition to paying attention to the health education of patients, it is also necessary to master its tertiary prevention, to achieve early detection, early diagnosis, and early treatment, which can effectively reduce the incidence of diabetes and improve the quality of life of patients [12]. With the increase in the number of diabetic patients, the TCM theory of "preventive treatment of disease" advocates prevention before disease, prevention of disease progression, and prevention of prognosis and prevention, which play a large role in guiding the prevention and treatment of diabetes. In the Qing Dynasty, Ye Tianshi once proposed "safety before evil", which also emphasized the importance of curing the disease. For high-risk subjects such as cardiovascular and cerebrovascular diseases, obesity, and family history of diabetes, Mr. Song asked them to develop good living habits, strengthen exercise, eat a balanced diet, lose weight scientifically, monitor blood sugar regularly, and maintain a good mood. To further prevent the occurrence and development of diabetes. Some studies have found that Baduanjin exercise can reduce fasting blood glucose, 2h postprandial blood glucose, and even glycosylated hemoglobin levels in diabetic patients; it can also reduce cholesterol and triglyceride levels[13]. In the face of diabetic patients, we must not only prevent the occurrence of complications, but also delay their development, but also truly improve the quality of life of patients.

# 5. Medical Case Example

The patient's surname is Huai, male, 46 years old.

Initial diagnosis on May 18, 2022: "Dry mouth, polydipsia, polyuria for 3 years, and night sweats for more than half a month." Symptoms include: dry mouth, polydipsia, night sweats, numbness of the feet, appetite, normal rest at night, dry stool, and yellow urine. Red tongue, thin yellow fur, stringy pulse. Diagnosis of Chinese medicine: Diabetes disease, dialectical is Yin deficiency and internal heat and blood stasis, the treatment is to nourish yin and clear heat, promote qi and activate blood to remove blood stasis, and use the formula of nourishing kidney and promoting blood circulation. Mulberry parasitic 12g, Chinese yam 12g, Digupi 10g, Chinese dogwood meat 9g, Cortex Moutan 10g, Achyranthes 15g, Polygala 10g, Magnolia 9g, Dilong 12g, Anemarrhena 9g, Motherwort 12g, Schisandra 12g, Licorice 3g. 7 doses, one dose per day,

decocted in 400ml of water and taken warm in the morning and evening. The patients were also instructed to strictly follow a diabetic diet and exercise, monitor blood sugar regularly, and prevent the occurrence of hypoglycemia.

2nd visit on May 25, 2022: After taking the above prescription, the patient measured a fasting blood glucose of 7.0-9.0mmol/L and 2h postprandial blood glucose of 10.0-12mmol/L. Complaints of occasional cough and asthma, phlegm in the throat, yellowish phlegm color, dry mouth, and thirst relieved than before, night sweats, slightly reduced numbness of both feet, appetite and appetite, improved after resting at night, normal stool and pale yellow urine. Red tongue, thin yellow fur, stringy pulse. On the basis above, add Polygala, Zhimu plus papaya 10g, Fangfeng 9g, Perilla leaf 12g, Tinglizi 15g.7 doses, one dose per day, decocted in 400ml of water and taken warm in the morning and evening. Dapagliflozin 10 mg qd was also given orally.

June 9, 2022 3rd clinic: After taking the medicine, the fasting blood sugar was measured to be controlled at about 7.2mmol/L, and the blood sugar 2h after meal was controlled to be about 9mmol/L. The patient complained of dry mouth, marked relief of thirst, no cough, marked relief of night sweats, occasional numbness in both feet, acceptable and good night rest, normal stool, and pale urine. Pale red tongue, thin fur, stringy pulse. On the top, remove Digu skin, Tinglizi, and perilla leaves. 7 doses, one dose per day, decocted in 400ml of water and taken warm in the morning and evening.

On June 29, 2022, at the 4th consultation, the fasting blood glucose was measured to be 6.0-7.0mmol/L, and the 2-h postprandial blood glucose was 8.0-9.0mmol/L. The patient complained that the dry mouth and polydipsia had basically disappeared, the numbnes of both feet was significantly relieved compared with before, there was no night sweats, and the patient was able to tolerate and rest at night. The stool was normal and the color of urine was pale. Pale tongue with thin coating and stringy pulse. The prescription is the same as above, 7 doses, one dose per day, decocted in water 400ml, and taken warm in the morning and evening(Figure 5).



Figure 5: SMBG (mmol/L) at Follow-up.

Note: The patient is a middle-aged male with a 3-year history of diabetes. He usually suffers from excessive work intensity and stress, and overwork consumes kidney qi and kidney yin. If kidney yin is insufficient, fire will be produced internally, and body fluid will be burned, resulting in dry mouth and excessive drinking. Deficiency of Qi leads to weakness of the channels, and stasis

of the channels leads to dystrophy, resulting in numbness of the limbs. If the kidney is deficient in opening and closing, it will cause polyuria. The dialectical is yin deficiency and internal heat and blood stasis syndrome, the prescription is added and subtracted with Yishen Huoxue prescription. In the prescription, Astragalus is used for numbness of limbs due to qi deficiency and blood stagnation, tonifying qi to move stagnation, compatible with Chinese yam, nourishing qi and yin, strengthening kidney essence, and quenching thirst; Shengdi is mainly used for clearing heat and nourishing yin. The power of thirst; mulberry parasite has the power of nourishing liver and kidney and nourishing blood, motherwort mainly promotes blood circulation and removes blood stasis and is diuretic; Achyranthes huai and Danshen invigorate the liver and kidney, promote blood circulation to remove blood stasis; licorice harmonizes various medicines. The whole recipe mainly embodies the power of nourishing yin and clearing heat, promoting blood circulation and removing blood stasis, and nourishing qi and nourishing yin. 2 At the time of diagnosis, the patient complained of loose stools, and it was okay to rest at night. Occasional cough and asthma and yellow sputum. Therefore, Polygalaceae and Anemarrhena were removed. Windbreak and relax tendons. 3 At the time of diagnosis, the patient's cough disappeared, and the night sweats were significantly relieved. Therefore, Tinglizi, Perilla leaves, and Digupi were removed to clear the deficiency and heat. 4 At the time of diagnosis, the patient had night sweats, thirst basically disappeared, and the numbness of both feet was relieved. In summary, after more than one month of treatment, the symptoms of the patient were significantly relieved or even disappeared, and the blood sugar control was relatively ideal.

#### 6. Conclusions

Teacher Song believes that the kidney is the main organ of diabetes, kidney deficiency is the root cause, kidney deficiency and blood stasis are the basic pathogenesis, and nourishing the kidney is the main method. Exercise has often seen good clinical effects, and it is worthy of our further study and reference.

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