

# Research Progress of Traditional Chinese Medicine Treatment of Polycystic Ovary Syndrome

Han Wu<sup>1</sup>, Xinchun Xiao<sup>2</sup>

<sup>1</sup>The First School of Clinical Medicine, Shaanxi University of Traditional Chinese Medicine ,  
Xian Yang, 712046, China

<sup>2</sup>Affiliated Hospital of Shaanxi University of Traditional Chinese Medicine ,Xian Yang, 712000,  
China

## Abstract

**In this paper, according to the characteristics of traditional Chinese medicine therapy in polycystic ovary syndrome in recent years, analysis the related clinical use of traditional Chinese medicine in the treatment of polycystic ovary syndrome literature, from the use of Chinese medicine compound, body acupuncture, acupuncture, cupping therapy, combination of acupuncture with medicine in several aspects, such as, to analyze the clinical effect of TCM treatment of the disease and the research direction. To provide theoretical reference for traditional Chinese medicine treatment of polycystic ovary syndrome.**

## Keywords

**Traditional Chinese medicine; Ovarian syndrome; The research progress.**

## 1. Introduction

Polycystic ovary syndrome (PCOS) is a common disease that afflicts women, which can be divided into reproductive endocrine diseases. This disease was first formally proposed by Stein and Leven-Thal in 1935. It is a kind of endocrine disorder syndrome co-existing with reproductive dysfunction and metabolic abnormality, and is characterized by higher than normal androgen level, persistent anovulation, polycystic ovarian changes or insulin resistance [1]. Patients with this disease in anovulation state for a long time, clinical manifestations of menstrual irregularities, infertility, obesity, hirsute, acne, etc., is an important factor for young women due to ovulation infertility, but also increased the risk of spontaneous abortion after pregnancy. PCOS does not exist in Chinese medicine. According to its clinical manifestations, PCOS can be classified into the categories of "infertility", "late menstruation", "amenorrhea", "leakage" and so on. Modern medicine in the near future in the clinical treatment of patients with PCOS mainly through intervention lifestyle, western medicine accelerate ovulation to improve hormone instability, the problem of metabolic abnormalities, but western medicine stimulate ovulation is often through instead of exogenous hormones play a role, not fundamentally regulates human reproductive endocrine function, and the side effect is bigger [2]. In recent years, TCM internal therapy has made some achievements in theoretical analysis and clinical application of PCOS treatment. This paper reviews the research progress of TCM diagnosis and treatment of PCOS in order to provide reference for subsequent clinical and scientific research.

## 2. Etiology and Pathogenesis

The pathogenesis of PCOS is complicated, and its causes have not been clearly determined [3]. Western medicine thinks this disease is related to hypothalamic-pituitary-ovarian axis dysfunction. Ancient doctors have different opinions on the etiology and pathogenesis of PCOS,

but most people still believe that it is based on kidney deficiency, qi stagnation, blood stasis and phlegm dampness, with deficiency and reality mixed, deficiency and reality marked, and the lesion is located in the uterine cell, which is closely related to dysfunction of kidney, liver, spleen and other organs [4].

### 3. TCM Compound Treatment

#### 3.1. Discuss from Kidney Deficiency

The most prominent clinical symptoms of PCOS patients are menstrual problems, including menstrual disorders such as sporadic menstruation and amenorrhea, as well as abnormal menstrual volume such as less menstruation and menorrhagia. "Fu Qing Zhu Nue" said: "Through the water out of all kidneys", women's menstruation has a close relationship with the "kidney-Tianguai-Chongren-utricle" axis; It is said in Plain Questions: On Ancient Innocence [5], "A girl was seven years old, with vigorous kidneys and long teeth; 27 and Tianguai to, ren Mai tong, Taichong mai Sheng, the month to nowadays, so there are children..... Qi qi, ren Pulse deficiency, Tai Chong pulse decline less, Tiancui exhaustion, tunnel impassability, so the shape is bad and no son also." Visible kidney is congenital, the root of gas, kidney gas filled, Tianguai sufficient, induce the arrival of menstruation, if the female congenital insufficiency of kidney gas jingxue can not be born Tianguai, chong Ren dysfunction, leading to the blood of the classics can not converge chong Ren, the postmordial kidney gas is not filled, water grain fine insufficient, causing the sea of blood can not overflow on time, Therefore, if PCOS patients have menstrual problems, the kidney should be blamed first. Zheng Qiuhan [6] compared the efficacy of Traditional Chinese and Western medicine in PCOS patients with kidney deficiency and blood stasis. The control group was treated with clomiphene citrate, and the observation group took oral Tonifying kidney Huoxue Huayu Decoction. The two groups were compared. Results The total effective rate of observation group was 98.00%, higher than that of control group 80.00%, the difference was statistically significant. Tian Ying et al. [7] randomly divided 84 PCOS patients into two groups. The control group only received general Western medicine therapy, and the observation group was treated with Tonifying kidney and Activating Blood Tiojing Decoction on the basis of Western medicine therapy. The total effective rate in the control group was 64.29%, which was significantly higher in the observation group. The pulsatile index and resistance index of uterine blood flow in the observation group decreased more obviously than that in the control group. Sun Bing [8] thinks that the pathogenesis of PCOS patients the most basic should be kidney empty, his experience medicinal materials mainly some kidney medicine to cure the disease, such as cultivated land, dogwood, medlar, dodder, fructus ligustri lucidi, ink dry lotus, mulberry parasitism, cornu cervi, epimedium, eucommia bark, etc., these kidney herbs formula and the success of the assistance of a large number of patients with pregnant childbirth; Hou Lihui [9] applied tonifying kidney and huatan prescription to treat PCOS patients, and the effective rate reached 96.67%. Meanwhile, the patient's hyperinsulinemia improved, and menstruation and ovulation gradually returned to normal. The effective rate of ethinylestradiol cyproterone tablet was only 75.00%. HongLian [10] to observe the treatment of 100 patients with PCOS, the control group and observation group all use the same routine western medicine therapy, observation group plus with kidney menstrual function soup, after three months of continuous treatment, two groups of ultrasound imaging in patients with ovarian volume, the number of follicles 2 -- 8 mm in diameter was significantly decreased, the reduction is greater than the control group and observation group. In addition, the ultrasound imaging of the patients treated by Bushen Tiaoqing decoction can obviously see the reduction of ovarian volume and follicle number, while the ovulation rate and pregnancy rate of the patients are higher than before, and the prognosis is better.

### 3.2. Discuss from Phlegm and Dampness

There are many patients with PCOS who are fat, loose and fat waist, greasy face, sweaty and sticky. These patients all belong to phlegm-dampness PCOS. When the spleen loses its normal transport and transformation function, it will cause obstacles in the distribution of body fluid, resulting in water and wet phlegm. This can be summarized as "all dampness and swelling belong to the spleen". "Danxi Xinfu, Son NINETY-three" said: "If a fat woman who suffers too much and is addicted to wine and food cannot become a fetus, her body will overflow with fat and block the uterus." Therefore, spleen deficiency and dampness is a major cause of infertility in PCOS patients. Wang Xiaoyan [11] studied the curative effect of Cangfu Expectorant Decoction on obese PCOS patients. She randomly divided the research objects into two groups. First, all patients were given metformin hydrochloride enteric-coated tablet, and the research group added Cangfu Expectorant Decoction on the basis of Western medicine. After treatment, body weight, BMI, waist/hip circumference, leptin levels, PRGE, PRL and GnRH levels of all subjects were significantly decreased, while E2, SHBG, Cor, ACTH and CRH were significantly increased, the differences were statistically significant, and the improvement degree of above indicators was better than the control group. Luo Binzhang [12] selected a group of infertility patients with PCOS with kidney deficiency and phlegm-dampness. The control group was treated with clomiphene, and the other patients were additionally treated with Zuogui Pill and Cangfu Phlegm-inducing soup on this basis. T, E2, LH, FSH and LH/FSH ratio of all subjects were significantly improved after treatment, and the improvement of hormone level in observation group was better than that in control group. In addition, the endometrial receptivity indexes of the two groups were significantly improved after treatment, and the improvement of the observation group was better than the control group. Sun Pingfeng et al. [13] took sputum PCOS patients as research objects and divided them into two groups. The control group was given Letrozole, while the treatment group was given Letrozole plus Wuji powder, and the changes of LH, FSH, T, FPG and FINS levels of all patients were monitored before and after treatment. And the two groups of patients with TCM syndrome, ovulation rate, pregnancy rate and early pregnancy abortion rate were compared. Results Serum LH, LH/FSH, T, FPG and FINS in the treatment group were lower than those in the control group, but there was no difference in FSH indexes between the two groups before and after treatment. Compared with the control group, ovulation rate and pregnancy rate in the treatment group were increased and early pregnancy abortion rate was decreased.

### 3.3. Treatment from Liver Depression

"Woman with liver for congenital" is a famous doctor in qing dynasty Ye Tianshi in "clinical guidelines basis" for the first time when it comes to medical thoughts, his disciple on its experience in put forward the following views: "today Mr Foliage case, strange through eight veins, solid and to the point, the second most liver, for women to liver is innate, negative condensation, easy Fei yu, yu qi and blood is also delay." Therefore, it can be seen that women's menstrual cycle, belt, fetus and labor are closely related to the liver. The first volume of seeds listed in Fu Qing Female Science analyzed in detail 10 kinds of etiology, pathogenesis and treatment prescriptions of infertility, and the "jealousy infertility" mentioned in it is very similar to the infertility caused by liver qi stagnation in PCOS patients. In the book, he says, "If a woman has evil in her bosom and is unable to bear children, people think that her heart is filled with hate, but it is only her liver and qi that are trapped." [14]. PCOS patients suffer from amenorrhea, body fat, hairy and other troubles for a long time, most of them are in poor mood, depressed or furious, and the heart of seeking children is too urgent, the patients' mood is not free and the liver qi is not comfortable, which leads to liver qi stagnation, qi and blood stasis, so that the rush ren, with pulse congestion, the door of the birth closed. Therefore, the method of regulating the liver is very important for INFERTILITY patients with PCOS, only when the liver

qi is comfortable can sperm become pregnant. Fu Baojun [15] treated some PCOS patients with clomiphene as the control group, and the other patients were treated with Baling Tiao Gan Decoction as the observation group on this basis. The clinical efficacy, TCM syndrome score, sex hormone index and adverse reactions were compared before and after treatment. Results The total effective rate of observation group was higher than that of control group. Lu Luyan [16] treated 84 PCOS patients, the control group was given clomiphene capsule, and the observation group was given Zuogui Shugan Decoction on the basis of Western medicine. The results showed that the total effective rate of the observation group was higher than that of the control group, the difference was statistically significant. Zhu Ling [17] divided infertility patients treated with PCOS into two groups according to the principle of randomization. The control group was treated with Western medicine, and the observation group was treated with shugan Qutan Sanyu Decoction orally. The treatment effect of the two groups was compared, and the total treatment efficiency of the observation group was significantly higher than that of the control group, and the difference was statistically significant.

## 4. Acupuncture Treatment

### 4.1. Body Acupuncture Therapy

Ling-zhi liu etc. [18] for differences in PCOS patients for the curative effect of acupuncture therapy, patients in control group of conventional western medicine treatment, the observation group to acupuncture, on the basis of selecting liver shu, CV 17, issue door, chung wan, pivot foot three mile, three vaginal intercourse, day, guan yuan, uterine cavity, lr 3 point, patients feel much air and then connect the electric acupuncture and some acupuncture points, Ovarian function and serum hormone levels were measured in all subjects after three months of continuous treatment. Conclusion: The levels of estradiol and progesterone, uterine volume and ovulation rate in the observation group were higher than those in the control group, and the levels of testosterone, luteinizing hormone, follicle stimulating hormone, leptin and ovarian volume were lower than those in the control group. Mao Meng rain etc. [19] first to 54 phlegmy wet PCOS patients with conventional western medicine treatment of pixu (spleen deficient), called the control group, to give the other 54 patients on the basis of conventional treatment of western medicine combined therapy with tong yuan stitch, observe two groups before and after treatment in patients with high androgen symptom scores, the results of two group of patients with high androgen symptom scores were significantly lower than before treatment, The decrease of the treatment group was significantly better than the control group. Cao Yu [20] randomly divided 56 patients into two groups and applied Dong's acupuncture method (Gynecology, Huchao, Yinlingquan, Guanyuan, uterus, etc.) to treat PCOS. The control group was given oral daying-35, and the results showed that this method could effectively reduce the androgen level of patients and improve ovarian function, and there was no statistical significance between the two groups.

### 4.2. Electroacupuncture Therapy

Yu Liqing [21] used electroacupuncture therapy for IR PCOS patients. Patients in the electroacupuncture group were needled at zusanli, Zhongwan, Qihai, Yishu, Shenshu, Pishu and Ciliao points, and then treated with electroacupuncture. The western medicine group was given metformin hydrochloride orally. These results indicate that electroacupuncture may be used to correct IR and adjust endocrine disorders of PCOS by regulating some dyslipidemia in patients, and the efficacy of treating IR PCOS is superior to or equal to metformin.

## 5. Combination of Acupuncture and Medicine

He Yaling et al. [22] In order to further study the efficacy difference between acupuncture and medicine combined with oral Chinese medicine in the treatment of polycystic ovary syndrome, patients admitted to the hospital were randomly divided into two groups, one group was treated with traditional Chinese medicine for menstrual regulation and pregnancy promotion alone, and the other group was treated with acupuncture. The results showed that the total effective rate of combined acupuncture and medicine group was significantly higher than that of single treatment group. Geng Yining [23] divided the patients into the group that received zuogui Shugan Decoction alone and the other group that received fire acupuncture combined with Zuogui Shugan Decoction. The conclusion showed that fire acupuncture combined with Zuogui Shugan Decoction had significant advantages in improving the clinical efficacy of PCOS infertility patients. Zhong Qiuzhu [24] divided 126 cases of PCOS patients with spleen deficiency and phlegm-dampness into two groups. The control group was treated with cycle adjustment alone, and the observation group was treated with acupuncture on the basis of the control group. The differences of body mass index (BMI), serum sex hormone and islet function were observed before and after treatment in 2 groups, and the clinical efficacy, periodic ovulation rate and clinical pregnancy rate were compared between 2 groups. Results The total effective rate of observation group was higher than control group, the difference was statistically significant.

## 6. Acupoint Embedding Combined with Traditional Chinese Medicine

Lin Ziyu et al. [25] divided 90 patients with phlegm block infertility into two groups, in order to study the efficacy comparison between acupoint catgut-embedding and western medicine alone. One group was treated with clomiphene tablets, the other with acupoint catgut-embedding therapy. Ovulation rate, pregnancy rate, effect of menstruation regulation and incidence of adverse reactions were compared between the two groups during treatment. After treatment, the ovulation rate and pregnancy rate in the control group were slightly lower than those in the treatment group, but the total effective rate of menstruation in the treatment group was significantly higher, and the incidence of adverse reactions was also lower. The difference between the two groups was statistically significant. Ning Donghong et al. [26] explored the clinical effect of Xiaodao Tiaojing Decoction combined with acupoint catgut-embedding in the treatment of PCOS patients with infertility, and divided the eligible patients into two groups, the control group was treated with clomiphene, and the observation group was treated with Xiaodao Tiaojing Decoction combined with acupoint catgut-embedding on the basis of the control group. Results The levels of E2 and FSH in the observation group were higher than those in the control group, and the LH level was lower than that in the control group. The ovulation rate and pregnancy rate in the observation group were higher than those in the control group. There was no statistical difference in the incidence of adverse reactions between the two groups.

## 7. Conclusion

According to the above data, TRADITIONAL Chinese medicine plays a significant role in the treatment of PCOS, and the clinical efficacy is significantly increased by adding traditional Chinese medicine into the treatment process. In recent years, traditional Chinese medicine combined with other therapies has been used to treat PCOS more effectively than traditional Chinese medicine compound. As the value of women is gradually reflected in society, women of childbearing age are playing more and more important roles in the workplace and life, and their pressure is also increasing. The incidence of PCOS is increasing year by year. TCM treatment of

PCOS not only has unexpected curative effect, but also has simple operation, short time consuming, few side effects and various methods. However, the current clinical studies on THE treatment of PCOS by TRADITIONAL Chinese medicine are mostly low-sample size, short-cycle randomized controlled trials or individual cases. Therefore, it is hoped that multiple and multi-center trials can be carried out in clinical practice in the future to provide more sufficient evidence and more prominent clinical effects for the treatment of PCOS.

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