# **Research Progress of Traditional Chinese Medicine Therapy on PCOS**

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Abstract: Polycystic ovary syndrome is a common reproductive endocrine metabolic disease in adolescents and women of childbearing age, with 55% being severe and leading to infertility. Currently, the pathogenesis of this disease is not clear. Traditional Chinese medicine attributes this condition to dysfunction of the kidneys, liver, and spleen. This disease has multiple types of syndromes, mainly divided into kidney deficiency and blood stasis, spleen deficiency and phlegm dampness, liver depression and spleen deficiency and qi stagnation and blood stasis, and phlegm and blood stasis intermingling. The clinical manifestations of each syndrome type are different. In recent years, traditional Chinese medicine has achieved satisfactory results in treating this disease. Targeted treatment for the disease not only regulates endocrine and metabolic disorders in the body, but also has high drug safety. This article summarizes and analyzes clinical research on the treatment of polycystic ovary syndrome (PCOS) in traditional Chinese medicine by consulting ancient literature and modern medical journals. By using the literature review method, it summarized and analyzed the traditional Chinese medicine etiology, drug action mechanism, and positive effects of traditional Chinese medicine treatment for polycystic ovary syndrome. This provides a scientific theoretical basis for the prevention and treatment of PCOS in traditional Chinese medicine.

Keywords: Polycystic ovary syndrome; Traditional Chinese Medicine; Research progress

# 1. Introduction

Polycystic ovary syndrome (PCOS) is one of the common endocrine diseases in gynecology, characterized by high androgen levels, persistent anovulation, and polycystic ovary like changes. It mainly includes menstrual disorders, infertility, and often accompanied by symptoms such as acne, Black acanthosis, hirsutism, and obesity. Based on the research results, the disease accounts for about 20% of women of childbearing age <sup>[1,2]</sup>, among Chinese women of childbearing age, the incidence rate of the disease is about 5% [3], mainly in women's adolescence. At present, the etiology of this disease is not yet clear, and related theories include hypothalamic pituitary ovarian regulatory dysfunction, insulin resistance, hyperinsulinemia, and decreased adrenal endocrine function. At present, the incidence rate of polycystic ovary syndrome is increasing year by year. It is reported that <sup>[4]</sup> PCOS patients account for about 40% of infertility patients; Among patients with anovulatory infertility, about 75% of them suffer from this disease. Patients with polycystic ovary syndrome usually complicated with type II diabetes, coronary heart disease, hyperlipidemia, breast cancer, gynecological tumors and other patients. Traditional Chinese medicine categorizes this disease as "irregular menstruation" and "infertility", and believes that its pathogenesis is related to the imbalance of the relationship between kidney chong ren and the restraint of uterine growth, and dysfunction of the kidneys, liver, and spleen leading to phlegm dampness and blood stasis <sup>[5]</sup>.

## 2. Pathogenesis of PCOS

The term "polycystic ovary syndrome" is not recorded in traditional Chinese medicine, But based on the patient's clinical manifestations, this disease can be classified as "excessive menstruation", "late menstruation", "amenorrhea", "infertility", etc <sup>[6]</sup>. The earliest medical records in ancient Chinese medical books <sup>[4]</sup> recorded that polycystic ovaries resemble "nests" and are formed by the mutual

accumulation of phlegm and blood stasis. Their morphology is often "like the hole of a bee in a room, like the lotus seed embedded in a fluff, easy to grow, but difficult to peel off." The "Women's Regulations" describes: "The meridians are not regulated, and diseases are all in the kidney meridian, The General Records of Shengji records that "women have no children, and due to insufficient Chong Ren, their kidney qi is weak." Zhu Danxi of the Yuan Dynasty wrote in his book "Ge Zhi Yu Lun": "Those who are in charge of blocking the kidneys are also in charge, while those who are in charge of relieving the qi are in charge of the liver." If the relationship between the relaxation of the liver and the closure of the kidneys is imbalanced, resulting in menstrual disorders <sup>[7]</sup>. However, liver wind can easily invade the spleen and soil, causing water and grain essence to be subtle and water dampness to not be transported, resulting in phlegm and turbid internal growth<sup>[8]</sup>. Phlegm dampness obstructs the meridians and uterus, and therefore cannot produce sperm and become pregnant. Therefore, the "Wan Family Women's Medicine-Tiaojing Chapter" states: "Fat people who have little water through the meridians are responsible for their phlegm obstructing the meridians and tunnels. Therefore, later doctors focused on kidney deficiency, with phlegm dampness and blood stasis as the standard, involving the liver and spleen. However, the etiology and pathogenesis of this disease are still unclear. In recent years, many medical experts have delved into the etiology of PCOS and classified it based on differentiation of symptoms and signs. There are similarities and differences in their views. However, most medical experts believe that the main causes of this disease are dysfunction of the kidneys, liver, and spleen. Pathological factors such as phlegm dampness and blood stasis disrupt the regulatory functions of the kidneys, Tiangui, Chongren, and uterus, ultimately forming different syndrome types. There are five types of liver stagnation and spleen deficiency syndrome: qi stagnation, blood stasis, and spleen deficiency.

## 2.1. Kidney deficiency and blood stasis

During the process of menstruation and pregnancy in women, the kidney plays a dominant role. According to the "Suwen Ancient Innocence Theory", "The Qi Qi Ren meridian is weak, the Tai Chong meridian is weak, the Tian Gui is exhausted, and the underground passage is blocked, so the form is bad and there are no children. The book "Correcting Mistakes in the Medical Forest" states: "Since the vitality is weak, it cannot reach the blood vessels, and if there is no qi in the blood vessels, it will remain stagnant and become blood stasis." If the kidney yang is insufficient, the qi is abnormal, unable to warm and promote blood circulation, it can cause blood to stagnate and form kidney deficiency and blood stasis. Most doctors believe that kidney deficiency and blood stasis syndrome is the fundamental pathogenesis of polycystic ovary syndrome. Early Chinese medicine expert Sun Weifeng <sup>[9]</sup> believed that kidney deficiency and blood stasis were the direct causes of the disease, and the disease was located in Chongren, which could involve organs such as the kidneys, liver, and spleen. And You Zhaoling et al. <sup>[10]</sup> believe that this disease is caused by kidney deficiency leading to dysfunction of the kidney's reproductive function, as well as an imbalance of qi, blood, yin, and yang.

## 2.2. Spleen deficiency and phlegm dampness

The spleen is the foundation of nurture and the source of qi and blood biochemistry. If the liver qi is reversed, the diet is not proper, it offends the spleen and stomach, overcomes the spleen and soil, or the spleen is deficient, and the acquired water and grain essence is slightly lost in circulation. Over time, water and dampness will stop in the uterine cell network, causing dampness and evil to gather and turn into phlegm and saliva, and phlegm and dampness overflow the skin. Therefore, spleen deficiency and phlegm and dampness are another important pathogenesis of PCOS. Early Chinese medicine experts <sup>[11]</sup> believed that most PCOS patients were obese, and the main cause of obesity was the stagnation of phlegm and dampness. The spleen was the source of phlegm, and the formation of phlegm and dampness was inseparable from the pathogenesis of spleen yang deficiency and decline.

## 2.3. Liver Depression and Spleen Deficiency

Women are born with a liver and need blood. The liver stores blood, regulates emotions, and is an important organ related to women's physical and mental health. If a woman experiences long-term work and life stress and emotional distress, it can easily lead to liver loss and laxity, obstructing qi and blood flow, which can lead to blood stasis. If the liver qi stagnates, it can damage the spleen over time, weaken the spleen and stomach, cause biochemical deficiency of qi and blood, and lead to loss of nourishment, which can cause diseases such as late menstruation, low menstrual volume, and amenorrhea <sup>[4,12]</sup>. In the research of early scholar Pang Baozhen <sup>[13]</sup>, it was pointed out that patients with

polycystic ovary anovulatory infertility have varying degrees of liver depression and qi stagnation, which indirectly supports this etiology.

## 2.4. Qi stagnation and blood stasis

The "Ji Sheng Fang" records: "When the qi of a woman stagnates, blood becomes qi. Either the menstrual cycle is not regulated, causing pain in the heart and abdomen; or when the menstrual cycle is about to go, causing pain in advance." The liver is mainly composed of blood and is used for qi. If liver stagnation is not smooth, blood stasis becomes blood stasis, which then blocks the Chongren uterus, it can lead to sparse menstruation, retrograde menstruation, metrorrhagia, amenorrhea, and so on. Domestic scholars <sup>[14]</sup> believe that PCOS patients often have complications such as obesity, skin acne, infertility, etc., leading to emotional distress and greater psychological pressure. Therefore, "qi stagnation" is an important cause of PCOS.

#### 2.5. Phlegm and blood stasis accumulation

The dampness and dampness are severe and sticky, serving as the source of phlegm. Phlegm turbidity is not only a pathological product of abnormal water metabolism, but also a pathogenic factor. Zhu Danxi of the Yuan Dynasty first proposed the theory of phlegm and blood stasis. It is related to phlegm stasis syndrome. Causing the formation of cysts. According to "Essentials of Female Medicine", "amenorrhea in obese individuals must be due to dampness and obstruction of the lipid membrane." Famous Chinese medicine expert Fu Shuqing <sup>[15]</sup> pointed out that the combination of phlegm and blood stasis is an important factor in the pathogenesis of PCOS. Another domestic scholar <sup>[16]</sup> attributed the pathogenesis of PCOS to "phlegm stasis in the uterus", with phlegm stasis as the criterion, and it is an important reason for ovulation disorders in PCOS patients. Research has shown that dysfunction of the kidney, liver, and spleen can lead to phlegm and blood stasis, which can cause PCOS or worsen the patient's condition.

## 3. Pharmacological mechanism of traditional Chinese medicine in treating PCOS

The treatment of PCOS with traditional Chinese medicine is mainly focused on strengthening kidney qi, improving blood circulation and resolving blood stasis. Based on the theory of traditional Chinese medicine properties and clinical expertise, it is used to treat various syndrome types of PCOS.

## 3.1. Regulating Neurohypophysis Function and Correcting Sexual Hormone Disorders

According to literature<sup>[3]</sup>, dysfunction of the hypothalamic pituitary gonadal axis is closely related to the occurrence of PCOS. If a patient has excessive levels of androgen in their body, it can promote thickening of the ovarian white membrane, inhibit follicular development, and affect ovarian cyclic ovulation and sex hormone secretion. Due to anovulation and persistent low levels of progesterone, endometrial hyperplasia cannot be shed on time, which is also an important cause of endometrial lesions. Pan Wen et al. <sup>[17]</sup> used Bushen Huayu Tang in animal experiments on PCOS rats, and the results showed that this formula can effectively reduce the levels of serum testosterone (T), luteinizing hormone (LH), and estradiol (E2) in rats, increase the levels of sex hormone binding protein (SHBG), promote follicular development, maturation, and excretion, and reverse polycystic ovary changes. Luo Shicun et al. <sup>[18]</sup> applied the modified formula of Cangfu Daotan Pill to PCOS rats, and the results were basically consistent with Pan Wen, indicating that the modified formula of Cangfu Daotan Pill has a certain therapeutic effect on PCOS diseases and can improve ovarian function and abnormal sex hormone levels. In recent years, other scholars <sup>[19,20]</sup> found that Turong Bushen Recipe can improve the quality of oocytes in PCOS patients, raise the level of androgen, and improve the ovarian microenvironment of patients.

## 3.2. Expression of influencing genes and regulatory factors

PCOS has a genetic basis and obvious family aggregation. Gene factors play a very important role in the etiology of PCOS <sup>[21]</sup>. In early studies, domestic scholars such as Yu Jin <sup>[22]</sup> found that taking cryptotanshinone on PCOS rats can inhibit the expression of CYP17 gene and AR in the ovaries of diseased rats, reverse the concentration of T, A2, LH, and SHBG in the serum of PCOS rats; Inhibiting the androgen secretion function of disease model cell lines. Lan Nan et al. <sup>[23]</sup> fed compound malt pills

to PCOS rats and found that the pills could reduce IL-6 and TNF levels- $\alpha$ Serum concentration promotes the recovery of symptoms in PCOS rats. Chen Yangdi et al. <sup>[24]</sup> pointed out that Compound Xingxia Tang can reduce the weight of overweight mice with PCOS, and reduce LH, FINS, FPG, and TNF in the body of mice- $\alpha$ , IL-6 serum level. Afterwards, Jiang Xiaolin et al. <sup>[25]</sup> studied the mechanism of action of traditional Chinese medicine on PCOS rats by adding Gexia Zhuyu Tang to the use of metformin, and found that this formula can reduce NF-KB activation reduces the expression of TLR-4 and ox-LDL, IL-6, and TNF- $\alpha$ Secretion can improve the symptoms of diseased rats. Shi Mingqing et al. <sup>[26]</sup> used a proposed kidney tonifying and spleen strengthening formula (red peony root, ripe ground root, cornus officinalis, dodder seed, Huai yam, deer antler gum, Poria cocos, Danpi, Dipsacus, Epimedium, Fritillaria, saponin horn thorn, and Atractylodes macrocephala) to select patients with PCOS kidney deficiency and phlegm dampness type for study. After 3 months of intervention, it was found that the serum levels of luteinizing hormone, follicle stimulating hormone, testosterone, and hypersensitive C-reactive protein in the observation group were significantly lower than those in the control group. Indicating significant clinical efficacy.

## 3.3. Improving insulin resistance and correcting dyslipidemia

In 1980, Burghen et al. first proposed that insulin resistance is involved in the pathological process of PCOS. It has been found that more than 50% of PCOS patients have insulin resistance, and the incidence rate is about 20% higher than that of the general population. The incidence of PCOS patients in youth is significantly higher, and the probability of PCOS patients suffering from type II diabetes is significantly higher, and patients are often accompanied by dyslipidemia <sup>[27]</sup>. In early studies, People have discovered <sup>[28]</sup> that traditional Chinese medicine tablets made from Angelica sinensis, licorice, Poria cocos, tractylodes macrocephala, safflower, and white peony have a significant impact on lipid metabolism in PCOS patients. After treatment, serum cholesterol, low-density lipoprotein cholesterol, and prolactin values were significantly reduced, estradiol values were significantly increased, BMI and WHR values were reduced, and abnormal lipid metabolism was improved. Afterwards, domestic scholar Zhang Ting <sup>[29]</sup> conducted a study on the expression of PI3K/PKB molecules in the insulin signaling pathway of PCOS rats using the decoction of ground bone bark, and found that the decoction could maintain the estrous cycle of PCOS rats, reduce rat weight, and significantly reduce serum testosterone and fasting insulin levels. Foreign scholars such as Jamilian M<sup>[30]</sup> evaluated the impact of soy isoflavones on the metabolic status of PCOS patients. The study found that compared with the control group, giving soy isoflavones significantly reduced patients' circulating insulin levels and increased the quantitative insulin sensitivity test index. Taking soy isoflavones for 12 weeks can significantly improve insulin resistance. Borzoei A et al. [31] conducted a double-blind randomized controlled clinical trial to investigate the effect of cinnamon on 84 overweight or obese PCOS patients. After 8 weeks of intervention, it was found that Cinnamomum cassia could significantly improve serum total antioxidant capacity, and significantly improve serum total cholesterol, low-density lipoprotein cholesterol and high-density lipoprotein.

## 3.4. Improve endometrial receptivity and ovarian morphology, increase pregnancy rate

In early studies, it was found that traditional Chinese medicine can improve the ovarian morphology of PCOS patients. For example, Cui Xuefang et al. [32] used the method of tonifying the kidney and eliminating phlegm to treat 50 PCOS patients. Their ultrasound examination found that the ovarian volume of the patients was significantly reduced, and ovarian function was significantly improved. Kuek S<sup>[33]</sup> and others used traditional Chinese medicine Tiangui capsule to treat PCOS patients. After 3 months of medication, perform imaging examinations, and their bilateral ovaries were significantly reduced and their morphology was significantly improved. Afterwards, Fan Haiving [34] and Du Juan [35] respectively used Bushen Zhuyun Formula and Bushen Tiaojing Decoction to treat PCOS patients. The research results showed that Bushen Zhuyun Formula can improve the anti-estrogen effect of clomiphene, improve endometrial thickness, promote follicular development, and thus increase pregnancy rate. And Bushen Tiaojing Tang can also improve the thickness and morphology of the patient's endometrium, promote menstrual recovery, promote ovulation, and increase pregnancy rate. Afterwards, domestic scholar Qiu Xuefeng [36] conducted in vitro fertilization embryo transfer (IVF-ET) on PCOS infertility patients with spleen and kidney yang deficiency. Before taking orally the tonifying kidney and strengthening spleen decoction for traditional Chinese medicine conditioning. The research results found that this decoction can increase the number of high-quality embryos. Improve the fertilization rate and biochemical pregnancy rate of patients. Chen Changgian et al. <sup>[37]</sup> provided early intervention with traditional Chinese medicine for PCOS pregnancy patients, and the results showed

that early intervention with traditional Chinese medicine can reduce early pregnancy discomfort and reduce early pregnancy loss.

## 4. Other Traditional Chinese Medicine Treatment Methods

## 4.1. Conventional acupuncture method

Acupuncture, as a non-pharmacological therapy, can regulate the human body both locally and globally in the treatment of PCOS, reflecting the holistic view of traditional Chinese medicine treatment <sup>[4]</sup>. Local acupuncture is applied to the ovaries and uterus, and overall to the sympathetic nervous system and gonadal reproductive axis, ultimately achieving the goal of improving the symptoms of polycystic ovary syndrome. Early studies <sup>[38]</sup> have shown that acupuncture treatment has significant therapeutic effects on improving ovulation and conception rates in patients with PCOS. In recent years, with the continuous development of acupuncture and moxibustion therapy, more and more scholars have discussed the therapeutic effect of acupuncture and moxibustion on polycystic ovary syndrome. For example, Wang Baolian<sup>[39]</sup> adopted acupuncture cycle therapy, with the main acupoints selected as Qihai, Guanyuan, Zusanli, Sanyinjiao, etc. Postmenstrual acupoint selection: ovaries, Taixi; Meridian interval acupoint selection: Blood Sea, Taichong. Pre-menstrual acupoint extraction: waterways, underground machines. Three cycles of treatment were given, and the research results showed that the observation group had better rates of dominant follicle cycle, luteinized unruptured follicle syndrome cycle, and improvement in endometrial thickness compared to the control group. The pregnancy rate was significantly higher than the control group, and the difference was statistically significant (P<0.05). Tao Shuzhen et al. [40] used acupuncture to treat menstrual irregularities caused by PCOS (taking acupoints such as Geshu, Ganshu, Shenshu, Zusanli, Sanyinjiao, Taichong, etc.). After 18 weeks of treatment, it was found that the effective rate of the acupuncture group was 100%. Li Tong [41] used the method of regulating the spleen and stomach acupuncture to treat ovulation disorders of spleen deficiency and phlegm dampness type PCOS (acupoints selected: Zhongwan, Zusanli, Fenglong, Hegu, Taichong, Quchi, etc.). After 3 cycles of treatment, it was found that patients in the observation group experienced amenorrhea. Traditional Chinese medicine syndrome scores, testosterone levels, and other indicators have been improved, as well as insulin resistance and blood lipid levels.

## 4.2. Warm needle moxibustion

Warm acupuncture and moxibustion can dispel cold and dehumidify, warm yang and replenish qi, improve the morphology of endometrium, thus providing a better environment for zygote implantation <sup>[42]</sup>. Li Jing <sup>[43]</sup> and others divided 60 patients with phlegm dampness syndrome and polycystic ovary syndrome into two groups. On the basis of treatment in the control group, the treatment group was treated with warm acupuncture and moxibustion (acupoints: Guanyuan, Sanyinjiao, uterus, Fenglong).The results showed that warm acupuncture and moxibustion combined with Cangfu Daotan Decoction had significant effect on phlegm dampness type PCOS, and could significantly improve the symptoms of traditional Chinese medicine. Li Mengyang <sup>[44]</sup> treated 40 PCOS patients in the experimental group with Bushen Tiaojing Decoction and warm acupuncture and moxibustion on the basis of oral conventional western medicine treatment. After three menstrual cycles, the ovulation rate and FSH levels in the experimental group were higher than those in the control group.

## 4.3. Fire Needle Therapy

The fire needle therapy is an important part of acupuncture and moxibustion therapy. It stimulates the acupoints after heating and burning the needles, which has the functions of warming meridians to dissipate cold, promoting yang to dissipate qi, dispelling knots and eliminating symptoms <sup>[44,45]</sup>. It promotes the implantation of zygote of PCOS patients by improving and optimizing the follicular development environment of the body <sup>[46]</sup>. Wu Na <sup>[47]</sup> selected acupoints such as Sanyinjiao, Zhongji, Guanyuan, and uterus for 30 patients with PCOS, and treated them with fire acupuncture. The control group received routine acupuncture treatment. After three cycles of treatment, the effective rate of the fire needle group was 86, and the levels of sexual hormones in patients with polycystic ovary syndrome improved. Geng Yining <sup>[48]</sup> treated PCOS infertility patients with Zuogui Shugan Tang combined with fire acupuncture. Choosing acupoints such as Sanyinjiao, Zhongji, Guanyuan, and uterus. After two cycles of treatment, the number of ovulation and ovulation cases in patients significantly increased, and

the serum testosterone level was significantly lower than before treatment. Pregnancy rate has increased. The pregnancy rate was improved.

## 4.4. Electroacupuncture treatment

Electroacupuncture has the effect of improving serum hormone levels and regulating ovarian function <sup>[49]</sup>. Yu Liqing et al. <sup>[50]</sup> used electroacupuncture to acupuncture points such as Zusanli, Zhongwan, Qihai, Yishu, and Shenshu. Compared to oral Western medicine. After three cycles of treatment. The electroacupuncture group showed a significant decrease in serum T, insulin resistance index, triglycerides, and total cholesterol, low-density lipoprotein, and other indicators in PCOS patients compared to the Western medicine group, indicating that electroacupuncture may regulate some blood lipid abnormalities in the body and adjust the endocrine level of PCOS patients. Xu Ge et al. <sup>[51]</sup> established a PCOS rat model and treated the rats in the electroacupuncture group with electroacupuncture. After 2 weeks of treatment, the serum luteinizing hormone, luteinizing hormone/follicle stimulating hormone ratio, and anti Mullerian tube hormone significantly decreased in the electroacupuncture and moxibustion to treat PCOS. After treatment, the effective rate of the study group was higher than that of the control group, with LH, FSH, LH/FSH levels, and T were lower than that of the control group.

#### 4.5. Acupoint catgut embedding

Early scholars such as Zhu Qiaoling [53] treated PCOS patients with acupoint catgut embedding therapy. After 3 months of treatment, the use of acupoint catgut embedding therapy can effectively improve the BMI index of obese PCOS patients. Compared with the control group, it can effectively regulate the hormone levels in PCOS patients and has a certain ovulation promoting effect. Subsequently, other scholars have conducted research. For example, in Pan Yongqin's [54] study, it was found that obese patients with PCOS were treated with Guiluo's Tiaozhou Formula combined with acupoint catgut embedding (selecting acupoints such as Shenshu, Pishu, Zusanli, Fenglong, Tianshu, Sanyinjiao, etc.). After 3 months of treatment, the patient's treatment efficiency was 92.85%, and the pregnancy rate was 38.89%. Yao Yao et al. <sup>[55]</sup> used the famous traditional Chinese medicine Xia Min from Chongqing to treat obese patients with PCOS, and combined with acupoint catgut embedding, selected acupoints such as Zusanli, Zhongwan, Fenglong, Pishu, uterus, Guanyuan, Sanyinjiao, etc., with significant therapeutic effects. Wu Jia <sup>[56]</sup> conducted acupoint catgut embedding intervention on PCOS patients alone, and the results showed that the improvement in T, LH, and body mass index of the patients was better than that of patients taking oral Western medicine. Chen Kaiwen<sup>[57]</sup> and others conducted acupoint catgut embedding intervention on PCOS rats, and buried catgut at Guanyuan, Zusanli, Taichong, Zhongji, Sanyinjiao and other points. The research results showed that this method could reduce insulin resistance of rats and effectively improve PCOS indicators. Another scholar [58] has combined lightning fire moxibustion with acupoint catgut embedding to intervene in patients with PCOS. The research results indicate that it can effectively regulate the levels of endocrine hormones in patients and has a more significant therapeutic effect on obese polycystic ovary syndrome patients.

## 4.6. Embedding beans in ear acupoints

In recent years, The traditional Chinese medicine external treatment method represented by ear point catgut embedding technology <sup>[59]</sup> has shown unique advantages in the treatment of polycystic ovary syndrome patients. In early studies by scholars, Research has found that for patients with polycystic ovary syndrome, selecting acupoints such as spleen, kidney, liver, and endocrine system. For embedding beans in the ear acupoints, local stimulation with Wangbuliu Xingzi was performed, and the ear acupoints were changed once a week, resulting in significant therapeutic effects. Li Fan <sup>[60]</sup> and others combined it with the theory of midnight noon ebb flow, so that patients can adapt to the changes of natural solar terms, press auricular points at the peak time of qi and blood flow in the liver, spleen, and kidney meridians, and continue treatment for three courses, It can change the patient's basal body temperature and improve the patients' ovulation rate and pregnancy rate. Wu Yuanyuan et al. <sup>[61]</sup> applied the theory of "Yang Hua Qi, Yin Shaping" in combination with ear point embedding beans to treat PCOS patients, which can achieve the effects of tonifying the spleen. Regulate qi and blood, reduce appetite, regulate endocrine and ovarian function.

## 5. Summary

Polycystic ovary syndrome is a common gynecological disease among women of childbearing age,

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and increasingly receiving attention from various sectors of society. Traditional Chinese medicine has multiple treatment methods, significant therapeutic effects, and high patient satisfaction. Multiple studies have shown that traditional Chinese medicine can regulate hormone levels in patients' bodies, regulate menstruation, promote ovulation, assist pregnancy, and no significant adverse drug reactions have been found. Traditional Chinese medicine therapy, based on the different physiological characteristics of women in different periods, A combination of various treatment principles and methods, such as tonifying the kidney, soothing the liver, strengthening the spleen, dispelling dampness and resolving phlegm, promoting blood circulation and resolving blood stasis, is often used. Combined with multiple treatment methods, the effect is significant. Not only that, but also auxiliary therapies such as acupuncture and moxibustion and ear point burying beans can be used to enhance the therapeutic effect.

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