

Progress of Chinese and Western Medicine Research on Polycystic Ovary Syndrome

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Abstract: Polycystic ovary syndrome (PCOS) is a common clinical disease of reproductive endocrine hormone abnormalities and metabolic disorders, with a variety of clinical symptoms and complex etiology. Recent studies have shown that genetics, reproductive endocrine hormones, inflammatory factors, intestinal flora, microRNAs, signal transduction pathways and insulin resistance are closely related to the development of PCOS. Regarding the treatment modalities of PCOS, Western medicine mostly focuses on symptomatic treatment for elevated androgens, ovulation abnormalities, menstrual irregularities and insulin resistance. Chinese medicine focuses on conditioning, and adopts Chinese medicine, acupuncture and needle-medicine combination for different identification and typing through the idea of holistic view. The combination of Chinese and Western medicine gives full play to the advantages between modern medicine and traditional medicine, and combines Western medicine with Chinese medicine for symptomatic treatment, which is a holistic approach and has significant therapeutic effects. Therefore, this paper provides an overview of the research on the etiology and pathogenesis of PCOS in recent years, as well as an overview of the treatment of PCOS by Western medicine, Chinese medicine and the combination of Chinese and Western medicine.

Keywords: Polycystic ovary syndrome, Chinese and Western medicine, Research progress.

1. Introduction

Polycystic ovary syndrome (PCOS) is a common clinical disorder of gynaecological reproductive endocrine hormone regulation with a global prevalence of up to 15% [1]. The Rotterdam Criteria for the diagnosis of PCOS are commonly used in clinical practice, which considers that the patient's serum androgen level is elevated compared with that of normal women, and that the patient has reduced ovulation and polycystic ovaries, and that the diagnosis of PCOS can be made if two of the three criteria are compatible with the diagnosis of PCOS. PCOS with the main clinical manifestations of infertility, menstrual disorders, hirsuteness, and acne. It has not only brought trouble to the normal life of patients, but also increased the occurrence of endometrial cancer, type 2 diabetes, and cardiovascular diseases. It also increases the risk of endometrial cancer, type 2 diabetes and cardiovascular diseases. In addition, the etiology of PCOS is complex, and insulin resistance, hyperandrogenaemia, chronic low-grade inflammation (CLGI), and adipose tissue dysfunction [2] may work together in the pathophysiology of PCOS, interacting with each other and forming a vicious circle. How to repair the ovulatory function of patients, restore regular menstrual cycles and reduce complications is an urgent problem. The purpose of this article is to introduce the research results of Chinese and Western medicine on the treatment methods of PCOS in recent years and to discuss the prospect of its clinical treatment, with a view to providing useful references for future clinical treatment and related basic research.

2. Western Medicine's Understanding of the Pathogenesis of PCOS

2.1 Genetics

PCOS is a hereditary disease, and a variety of genetic variants and markers that are implicated in the development of the

disease have been identified. Dong Jiaying et al [3] pointed out that the occurrence of PCOS is related to anti-mullerian hormone G146T genotype TT and allele T. In addition, anti-mullerian hormone G146T and its type II receptor gene polymorphisms also affect women's ovarian reserve capacity and hormone changes, which is one of the reasons leading to infertility in patients. Liang Xuefei et al [4] analysed the correlation between genetic polymorphisms and PCOS in the Zhuang and Han ethnic groups, and the results showed that the frequencies of the G allele at locus rs13429458, the T allele at locus rs13405728, and the C allele at locus rs12478601 were higher in PCOS patients compared with those in healthy women, suggesting that PCOS is associated with the occurrence of rs13429458, rs13405728, and rs12478601 gene polymorphisms, which are three susceptibility loci in Zhuang and Han patients.

2.2 Obesity and Insulin Resistance Factors

Obesity is a key factor in the occurrence and development of PCOS, and with the aggravation of obesity, the risk of the development of PCOS increases mildly. Zhou Zhenhuan et al [5] chose non-PCOS population and PCOS patients as research subjects, and the results showed that PCOS patients' body mass, BMI, waist circumference and hip circumference were higher than those of non-PCOS population, and there was a significant difference in obesity, number of hirsute months, and reproductive hormone levels. Yang Shuxian et al [6] included 160 PCOS patients in their study, and with insulin resistance index > 2.69 as the cut-off, fasting blood glucose and fasting insulin levels were higher in the insulin resistance group than in the non-insulin resistance group, and analysis by the Pearson's correlation coefficient method showed that fasting blood glucose ($r = 0.544$) and fasting insulin ($r = 0.987$)

were positively correlated with insulin resistance, suggesting that insulin resistance is closely related to the occurrence and

development of PCOS. In addition, there is an association between obesity and insulin resistance, and elevated BMI can trigger metabolic syndrome, aggravate insulin resistance, and also aggravate the degree of menstrual disorders, which in turn leads to the occurrence of PCOS. Dong Mengjiao et al [7] used univariate and multivariate logistic regression analysis for their study, and the results showed that elevated BMI was a risk factor for the development of insulin resistance in patients with PCOS [OR value (95% CI value) = 1.29 (1.18-1.42), $P < 0.05$], and the area under the curve of the subject's work characteristics (ROC) for the prediction of insulin resistance by BMI was 0.76, with an optimal threshold of 26.25 kg/m².

2.3 Life and Psychosomatic Factors

Xia Wanting et al [8] controlled 302 cases of PCOS with 300 healthy women, and the results showed that sleep duration was positively correlated with the prevalence of PCOS [OR value (95% CI value) = 2.512 (1.380-4.575), $P < 0.05$], revealing a potential aetiological link between circadian rhythm disorders and PCOS. Song Jiayi et al [9] randomly conducted a survey on female students enrolled in 18 universities in Tianjin, China, and the questionnaire showed that high stress [OR (95% CI) = 0.26 (0.11~0.64), $P < 0.05$], liking to eat greasy food [OR (95% CI) = 0.34 (0.12~0.95), and $P < 0.05$] were influential factors in the occurrence of PCOS, further confirming that poor lifestyle habits are an important cause of PCOS. Meng Xianqin et al [10] included 1781 cases of women admitted to the outpatient clinic of the Maternal and Child Health Hospital in Daxing District, Beijing, in their study, and the incidence of PCOS was higher in women with anxiety than in normal women, and multifactorial logistic regression analysis showed that the incidence of PCOS in women with anxiety was 2.884 times higher than that in women without anxiety.

2.4 Inflammatory Factors

Inflammatory response of the body also affects the female reproductive function, interleukin-6, C-reactive protein, tumour necrosis factor-alpha and so on all play an important role in it, inflammatory factors can affect androgen metabolism in order to promote the androgen level, and at the same time disturb the function of hypothalamus - pituitary - adrenal axis, so that follicle growth and development is affected. The findings of Xie Meigun et al [11] pointed out that chronic inflammation was present in 362 of 1031 PCOS patients, accounting for 35.11% of the total, significantly higher than that of 6.33% in the normal population, and multifactorial logistic regression analysis showed that chronic inflammation was an independent influencing factor in the development of PCOS [OR (95% CI value) = 1.593 (1.391~2.964). $P < 0.05$].

2.5 Factors of Hyperandrogen Secretion and Alteration of Intestinal Flora Profile

The ovaries and adrenal glands are the main organs secreting androgens in normal women, and the excess androgens in PCOS patients mainly come from testosterone secreted by the ovaries. At the same time, the adrenal glands are stimulated by high insulin levels to increase their sensitivity to

adrenocorticotrophic hormone, producing excess dehydroepiandrosterone, dehydroepiandrosterone sulphate, which will further lead to increased testosterone secretion and higher androgen levels. Excessive androgens will continue to stimulate the hypothalamus, resulting in disorders of female sex hormone secretion and abnormal ovulation. In recent years, there have been reports suggesting that neuro-endocrine changes play an important role in the development of PCOS. ESPARZA et al [12] compared female mice with de-ovulated mice with letrozole-induced PCOS and the results of the study showed that luteinising hormone levels in female mice with PCOS were four times higher than those of de-ovulated mice, and the frequency of luteinising hormone pulse secretion was increased by two times, with increased expression levels of kissin, neurokinin B, and prednisone genes encoded by Kiss1, Tac2, and Pdyn. The expression levels of kissin, neurokinin B, and dynorphin genes encoded by Kiss1, Tac2, and Pdyn were elevated. Among them, the elevated levels of kissin and neurokinin B were able to enhance the output of gonadotropin-releasing hormone (GRH) pulses and the sensitivity of pituitary to GRH, which led to the increase in the secretion frequency of luteinising hormone, and the increase in the efficiency of androgen synthesis by the cells of follicular membrane.

3. TCM's Understanding of the Pathogenesis of PCOS

PCOS does not have a name in Chinese medicine, and based on its pathological manifestations, Chinese medicine classifies the disease under the categories of "infertility" and "amenorrhoea". Ancient Chinese medical texts have recorded this evidence, that it is related to kidney deficiency, liver depression, spleen deficiency, phlegm dampness, blood stasis and other etiological factors, with kidney deficiency as the root cause and phlegm turbidity as the symptom, and the "Suwen-Qibinglun" suggests: "Those who are pregnant have a relationship with the kidneys." The "innate essence" of the human body is the kidney, which is the main store of essence, and the lack of kidney essence decreases the ability of qi and blood to produce, which leads to symptoms such as irregular menstruation and even infertility in women. The human body's "foundation of the day after tomorrow" is the spleen, the spleen is the master of transport and transformation, the master of blood, as the source of qi and blood, spleen deficiency, the ability to transport and transformation of water and dampness decline, it is easy to form the phlegm of the real evil, and in the long run, can be depressed and transformed into heat, resulting in dysfunction of the uterus, menstrual disorders, infertility and other symptoms. Modern medical doctors summarise their experience and believe that PCOS is based on kidney deficiency, and that dysfunction of the kidney-tiankui-chongren-baogongzhou will lead to menstrual disorders and infertility. Another opinion is that kidney deficiency and blood stasis is the fundamental pathogenesis of the disease. Kidney essence deficiency, deficiency of yin, lack of source of qi and blood, there is no way to inject into the uterus, so it is manifested as amenorrhoea. Weak kidney yang, unfavourable qi, water-dampness internal storage, liver depression and stagnation of qi, phlegm, dampness, blood stasis congestion of the uterine veins, manifested as a series of symptoms of mixed deficiency and reality [13].

4. Western Medical Treatment of PCOS

4.1 Pharmacological Treatment

4.1.1 Treatment of infertility

Under the influence of traditional ideological concepts in China, infertility often brings heavy social pressure to PCOS patients and seriously affects their quality of life. Therefore, most PCOS patients attach great importance to the treatment of infertility. Clomiphene citrate (CC) is the first-line ovulation induction drug for PCOS patients [14]. As an anti-sex hormone drug, CC acts on estrogen receptors in the hypothalamus and stimulates follicular development through a negative feedback mechanism. However, follicular development needs to be closely monitored during the medication period, and dosage increase or discontinuation should be chosen according to the individual patient's condition. In contrast, letrozole is usually considered as a second-line treatment for women with ineffective CC and no other infertility factors [15]. Letrozole is a member of the family of aromatase inhibitors, which reduces estradiol (β -estradiol, E2) levels and significantly reduces the risk of multiple follicular development. Another advantage of letrozole is that it does not affect endometrial oestrogen receptors and therefore does not have any deleterious effects on endometrial thickness or cervical mucus. A Meta-analysis of first-line treatments for PCOS showed that letrozole increased live birth and clinical pregnancy rates and shortened the duration of pregnancy compared to CC [14].

4.1.2 Treatment of IR

Insulin resistance is one of the most typical features of PCOS. Studies have found that 65% to 95% of women with PCOS have IR and compensatory hyperinsulinemia (CHI) [16]. Excess insulin can overstimulate ovarian tissue, leading to increased androgen synthesis in follicular endothelial cells and indirectly impairing the hypothalamus-pituitary-ovarian system. Thalamic-pituitary-ovarian axis regulation, causing endocrine dysfunction. Currently, the most common therapeutic strategy for IR is the use of insulin-sensitising drugs, such as metformin, glucagon-like peptide-1 receptor agonist (GLP-1RA), and thiazolidinediones (TZDs), with metformin is widely used in the treatment of PCOS [16]. Metformin increases insulin sensitivity in the liver and other tissues and prevents insulin overactivation in the ovary [17]. This mechanism may be related to metformin's inhibition of the mitochondrial respiratory chain and activation of adenosine 5'-monophosphate (AMP)-activated protein kinase (AMPK) [18]. In addition, metformin has been reported to have an effect on correcting menstrual patterns, restoring ovulation and even increasing the probability of pregnancy [19], but the exact mechanism is not clear.

4.1.3 Treatment of HA

Hyperactivation of androgens in HA may lead to problems such as ovulation disorders, menstrual disorders, hairiness and acne. For the treatment of HA, commonly used anti-androgen drugs include cyproterone acetate, spironolactone, finasteride and flutamide. Among them, cyproterone acetate has the strongest anti-androgenic effect,

which can directly inhibit androgen production by inhibiting gonadotropin secretion and increase the synthesis of sex hormone binding globulin (SHBG), blocking the action of androgens in the peripheral target organs, thus improving the clinical symptoms of patients such as menstrual disorders and ovulation abnormality [20]. However, cyproterone acetate should be used with caution because of the possibility of an increased risk of venous thrombosis and a strong dose correlation with the development of meningiomas.

4.2 Surgical Treatment

4.2.1 Conventional surgery

Surgical methods commonly used to treat PCOS include laparoscopic ovarian drilling (LOD), ultrasound-guided immature follicle puncture (IMFP), and traditional wedge resection of the ovary, and traditional ovarian wedge resection. Conventional open surgery results in larger incisions, prolonged recovery time, and potentially increased pain. In contrast, laparoscopic surgery for PCOS is clinically more useful and carries less risk of postoperative complications such as tissue adhesions. A case report of a patient with PCOS with bilateral enlarged ovaries showed improvement in hirsutism, normalisation of menstrual cycle and return of serum total testosterone to normal levels (46 ng/dL) after treatment with unilateral oophorectomy [21]. The patient did not experience any clinical deterioration during the one-year follow-up period. For most patients with PCOS, surgical treatment is usually chosen after conservative pharmacological treatment has failed, but in some specific cases, surgical treatment may be more effective.

4.2.2 Bariatric surgery

According to statistics, more than 60% of PCOS patients have overweight or obesity problems [22]. In addition to affecting the progress and regression of PCOS, obesity is also a high-risk factor for the induction of many diseases. Therefore, to address the obesity problem of patients, active intervention should be made at an early stage. It has been suggested that the reduction of body mass in overweight and obese women may help to restore normal menstruation and ovulation. Bariatric surgery is an option for women who suffer from both severe obesity and PCOS. A Meta-analysis of PCOS showed that in women with severe obesity and PCOS, bariatric surgery significantly reduced serum total and free testosterone levels, with remission rates of hirsutism and menstrual dysfunction reaching 53% and 96%, respectively, resulting in a significant cure rate of 96% (95% CI 88%-100%) for PCOS [23].

4.3 Lifestyle Interventions

Changing poor lifestyle is the first line of treatment for women with PCOS, and should be actively recommended both in the prevention or treatment should be actively recommended. Most studies have shown differences in baseline dietary intake between PCOS and non-PCOS populations. The PCOS population consumes more calories and saturated fats and not enough fibre. Therefore, dietary modification is important for the prevention and adjuvant treatment of PCOS. The Mediterranean diet (MedDiet),

ketogenic diet, and other dietary patterns [24] have been shown to reduce BMI, mitigate IR, and improve reproductive function. Of these, MedDiet is recognised as the healthiest dietary pattern and is included in the international guidelines for recommended healthy eating patterns [24]. A study of poor diets in women of childbearing age showed that adherence to MedDiet improved ovarian morphology (ovarian volume and number of follicles per ovary) by affecting obesity, IR and hyperandrogenaemia [25]. In addition to this, a healthy lifestyle can bring positive emotions to patients. Recent studies have shown that anxiety and depression are prevalent in women with PCOS, 38.6% and 25.7% respectively [26]. With the development of the biopsychosocial-psychological model, the idea that positive emotions play a crucial role in the progression of the disease has been confirmed.

5. Chinese Medicine Treatment for PCOS

5.1 Chinese Medicine Treatment

PCOS can be classified as "late menstruation", "scanty menstruation", "infertility" and "amenorrhoea" in Chinese medicine. Diseases within the scope. As the kidney is the main reservoir of essence and reproductive function, disorders of the menstrual cycle and infertility are mostly related to the kidney. Treatment mainly adopts the therapeutic idea of coordinating the liver, spleen, and kidney, and treats from the liver, spleen, and kidney, which has achieved better results in the clinic [27]. The formula of Jiawei Qigong Pill is an experimental formula composed of strengthening the spleen and inducing dampness, supplemented by nourishing the liver and tonifying the kidney, which has achieved satisfactory results in clinical treatment. Jin Dongmei et al [28] conducted a retrospective analysis of Jiawei Qigong Wan plus reduction in the treatment of PCOS (phlegm-dampness type), and found that Jiawei Qigong Wan could effectively reduce the levels of LH, LH/FSH, and T. This suggests that the promotion of pregnancy by Jiawei Qigong Wan may be related to the harmonisation of the levels of sex hormones in patients with PCOS. Jiawei Qigong Wan may achieve this goal by repairing the damaged LH synthesis and secretion function of the hypothalamus, and the specific mechanism needs to be further investigated. According to traditional Chinese medicine, *Cuscuta chinensis* is warm in nature and belongs to the liver, kidney and spleen meridians, with the effects of tonifying the kidney and fixing the essence, nourishing the liver and improving the eyesight, and stopping diarrhoea to tranquillise the foetus [29]. *Cuscuta* is included in many herbal formulas for infertility. In recent years, it has been shown that the main constituent of *Cuscuta chinensis*, *Cuscuta* flavonoids, has endocrine functions, including raising the levels of sex hormones, oestradiol and glycolipid metabolism. In addition, berberine, an isoquinoline alkaloid extracted from the berberine plant, has insulin sensitising effect, which can effectively increase glucose uptake and utilisation in peripheral tissues and increase insulin sensitivity, which can alleviate IR to a certain extent.

5.2 Acupuncture Therapy

Some studies have shown that by stimulating the ovarian sympathetic reflex, acupuncture treatment can regulate

ovarian blood flow, and continuous acupuncture therapy has a positive effect on improving hyperandrogenaemia, menstrual cycle and ovulation rate in women with PCOS. Xu Juan et al [30] showed that acupuncture not only promotes ovulation in infertile patients with PCOS by lowering LH and testosterone levels, but also reduces the patients' BMI levels. In addition, the results of Wang Yu et al [31] showed that acupuncture treatment could improve the ovulation rate and regulate lipid metabolism level in PCOS infertility patients with kidney deficiency and liver depression syndrome, which may be the reason for the reduction of BMI, and the specific mechanism needs to be studied in depth.

5.3 Sequential Therapy with Traditional Chinese Medicine

According to the characteristics of different phases of the menstrual cycle, the sequential therapy featuring traditional Chinese medicine adopts a staged treatment strategy. During the menstrual period, it promotes the discharge of menstrual blood by activating blood circulation and promoting menstruation. In the late menstrual period, nourishing the yin and tonifying the kidneys to promote follicular development. During the premenstrual period, warming and tonifying the kidney yang is used to maintain the function of the corpus luteum. This treatment can effectively improve microcirculation, improve IR and regulate the function of the hypothalamic-pituitary-ovarian axis. In addition to this, Yang Yang et al [32] analysed and researched the herbal sequential therapy and also found that the therapy had significant effects in improving oxidative stress damage and regulating serum hormone levels, and the ovulation and pregnancy rates in the herbal sequential therapy group were higher than those in the conventional western medicine (clomiphene) group.

5.4 Acupuncture Point Embedded Thread Therapy

As an effective means of clinical treatment for obese PCOS, acupuncture point buried thread has the advantages of strong stimulation, long-lasting efficacy, and small side effects. The study of Zhong Hao Yu et al [33] explored the clinical application and mechanism of acupuncture point buried wire therapy for obese PCOS, and found that it may play a role by affecting gene expression, correcting endocrine disorders, improving chronic inflammatory response in the body and regulating intestinal flora abnormalities, and the specific mechanism needs to be studied in depth.

5.5 Combination of Western and Chinese Medicine

Western medicine combined with traditional Chinese medicine to treat PCOS patients can combine the complementary advantages of western medicine to promote ovulation and traditional Chinese medicine to improve clinical symptoms, thus improving clinical efficacy. Wang Chunhuan [34] compared the western medicine group (progesterone capsule + Indo-35) with the western medicine group combined with Zi Kui Tang Plus Reduction in the treatment of PCOS, and the results showed that the total effective rate of treatment in the combined group was 95.56%, which was significantly better than the 78.57% in the western medicine group ($P < 0.05$), and the combined group's menstrual cycle, sex hormone levels, and follicular

development improved significantly compared to the western medicine group. Zhang Xiuye [35] observed the effect of clomiphene combined with Nourishing Essence and Seeding Jade Soup in the treatment of PCOS, and pointed out that the pregnancy rate of the observation group was 96.15%, which was higher than that of the control group treated with clomiphene alone, which was 81.08% ($P < 0.05$), and the improvement of sex hormone level and ovulation effect of the observation group were better than that of the control group. Western medicine combined with acupuncture in the treatment of PCOS patients can better exert the characteristics of western medicine to promote the elimination of sugar and acupuncture to dredge the meridians and regulate qi and blood, so as to complement the strengths and weaknesses, thus achieving the best therapeutic effect. Zhang Jasmine et al [36] observed the effect of Indo-35 combined with acupuncture in the treatment of PCOS patients, and found that the total effective rate of the combined group (93.8%) was better than that of the western medicine group (71.9%) ($P < 0.05$), and the clinical symptoms, menstrual cycle and ovulation of the patients in the combined group improved significantly compared with that of the western medicine group. Liu Yan et al [37] used Dong's acupuncture combined with western medicine (metformin hydrochloride tablets+Indo-35), and found that polycystic-like altered state, metabolic indexes and ovarian stromal haemodynamics in the treatment group were significantly improved compared with the western medicine group. Xue Lifeng et al [38] conducted a study on the effect of warm acupuncture combined with clomiphene in the treatment of PCOS, and found that the total effective rate, ovulation rate, and pregnancy rate of the combined group were 87.50%, 82.50%, and 42.50%, respectively, which were significantly better than those of the western medicine group, which were 67.50%, 60.00%, and 20.00% ($P < 0.05$), and the clinical symptoms of the patients in the combined group (menstrual irregularities, infertility, obesity, acne, hirsuteness, etc.) and sex hormone levels improved in the combination group compared with the western medicine group. Surgery combined with traditional Chinese medicine treatment generally refers to the treatment of PCOS patients with LOD treatment, and the medical practitioners prescribe traditional Chinese medicine according to the clinical symptoms of the patients after surgery under the guidance of the basic theories of traditional Chinese medicine. Compared with LOD combined with western medicine treatment, LOD combined with Chinese medicine treatment can better improve patients' clinical symptoms and avoid the occurrence of adverse drug reactions and side effects. Guo Zheng et al [39] compared the effects of LOD and LOD + Chinese medicine in the treatment of PCOS, and observed the postoperative efficacy of the two groups, and found that the ovulation rate and pregnancy rate of the LOD + Chinese medicine group were 86.00% and 70.00%, respectively, which were significantly higher than those of the LOD group, which were 68.05% and 47.92% ($P < 0.05$). Ma Sujuan [40] studied the effect of LOD + kidney tonifying and blood activating formula in the treatment of PCOS, and found that the ovulation rate and pregnancy rate of the study group were 75.00% and 68.33%, respectively, which were significantly better than those of the control group treated with LOD + clomiphene, which were 68.33% and 33.33%, respectively ($P < 0.05$), and the endocrine disorders of the study group were significantly better than those of the control group.

6. Summary

To sum up, Chinese medicine treatment of PCOS is a combination of holistic concepts and evidence-based treatment by various medical practitioners under the guidance of the basic theories of Chinese medicine, combining the evidence method and prescription drugs, or with acupuncture, auricular acupuncture points, acupoints embedded threads and other therapies, to regulate the function of the patient's internal organs and correct the disorders of the reproductive axis "Kidney-Tiankui-Rencong-Baogong," to achieve the effect of regulating the menstruation and promoting the conception of pregnancy. The effect is to regulate menstruation and promote pregnancy. Western medical treatment of PCOS is mainly based on contraceptive pills, ovulation drugs and hypoglycaemic drugs, supplemented by surgical treatment, which has the advantages of regulating menstrual cycle, improving insulin resistance, and promoting ovulation, etc., but it is accompanied by side effects and cannot be taken for a long period of time. There are relative shortcomings in the treatment of PCOS by Chinese medicine alone or by Western medicine alone. Chinese medicine has good long-term efficacy, but it is not easy for patients to co-operate with it, poor adherence, and a long treatment period, etc. The short-term efficacy of Western medicines is still good, but patients who take them for a long period of time will suffer from drug dependence, side effects, and poor long-term efficacy, etc. Through the comparison of studies, the combination of Chinese and Western medicine can effectively combine the advantages of both, and improve the clinical symptoms of patients. Through the comparison of the study, the combination of Chinese and Western medicine in the treatment of PCOS effectively combines the advantages of the two, to avoid the shortcomings, and can better improve the clinical symptoms of the patients, and more treatment options are worth further exploration and research.

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