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• Methodology

Consensus on the integrated traditional Chinese and Western medicine criteria of diagnostic classification in polycystic ovary syndrome (draft)

Jin Yu[1], Chao-qin Yu[2], Qi Cao[1], Li Wang[1], Wen-jun Wang[1], Li-rong Zhou[1], Jing Li[1], Qiao-hong Qian[1]

1. Department of Integration of Western and Traditional Chinese Medicine, Obstetrics and Gynecology Hospital of Fudan University, Shanghai 200011, China
2. Gynaecologic Department of Traditional Chinese Medicine, Changhai Hospital of Traditional Chinese Medicine, Second Military Medical University, Shanghai 200433, China

ABSTRACT

Polycystic ovary syndrome (PCOS) is the most common endocrine and metabolic disorder of women, with complex pathogenesis and heterogeneous manifestations. Professor Jin Yu recently wrote an article entitled “Proposal of Diagnosis and Diagnostic Classification of PCOS in Integrated Traditional Chinese and Western Medicine.” From this, the Obstetrics and Gynecology branches of the Chinese Association of Integrative Medicine and the China Association of Chinese Medicine collaborated with the Gynecology branch of the Chinese Association for Research and Advancement of Chinese Medicine to draft a report on the consensus of criteria for the diagnosis and classification of PCOS in integrated traditional Chinese and Western medicine. The diagnosis for PCOS includes all three features: (1) oligo-ovulation or anovulation; (2) clinical and/or laboratory evidence of hyperandrogenism; (3) PCOS is classified into four types: types Ia, Ib, IIa, and IIb. Syndrome differentiation types for PCOS in traditional Chinese medicine are as follows: Kidney deficiency with phlegm blockage syndrome, Kidney Yin deficiency with phlegm blockage and blood stasis syndrome, and Kidney deficiency with Liver Qi stagnation syndrome.

Keywords: polycystic ovary syndrome; consensus; diagnosis; classification; integrative medicine; holistic health; medicine, Chinese traditional

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1 Introduction

Polycystic ovary syndrome (PCOS) is by far the most common endocrine and metabolic disorder for women at puberty and of reproductive age, with a prevalence of 5.6% in China.[1–5] Characterized by anovulation, hyperandrogenemia and polycystic ovaries, PCOS causes not only infertility, but long-term complications such as type 2 diabetes mellitus (DM), hypertension, angiocardiopathy and endometrial carcinoma. During the past eight decades, controversies on the diagnosis of PCOS have continued because of its complex pathogenesis and heterogeneous manifestations; this is the case when using traditional Chinese medicine (TCM) as well. To improve integrated Western medicine and TCM research on PCOS, it is essential to create diagnosis and

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Correspondence: Prof. Jin Yu; E-mail: jyu@shmu.edu.cn; Chao-qin Yu, MD, Professor; E-mail: chqyu81@163.com

classification criteria for PCOS, according to its variety of clinical manifestations and laboratory features.[6–10]

Based on the reports "Proposal of Diagnosis and Diagnostic Classification of PCOS in Integrated Traditional Chinese and Western Medicine" by Professor Jin Yu in 2006 and 2007,[11,12] the Obstetrics and Gynecology branches of the Chinese Association of Integrative Medicine (CAIM) and the China Association of Chinese Medicine (CACM), and the Gynecology branch of the Chinese Association for Research and Advancement of Chinese Medicine (CRACM) held a meeting to create a draft of the consensus on the criteria for the diagnosis and classification of PCOS in integrated traditional Chinese and Western medicine in September 2016. This article is a further discussion on the draft that was created.

2 Diagnosis for PCOS

To diagnose PCOS, the following three features must be present in the patient: (1) oligo-ovulation or anovulation; (2) clinical and/or laboratory evidence of hyperandrogenism; (3) more than 12 follicles with a diameter from 2 to 9 mm in an ovary, either unilaterally or bilaterally, and/or an ovary volume of > 10 mL as shown on an ultrasound graph. Patients with congenital adrenal hyperplasia (CAH), Cushing's syndrome, hyperprolactinemia, tumors secreting androgen, dysfunctional thyroid disease, hypogonadotropic anovulation, and small follicle syndrome, or patients using exogenous androgen, should not be considered as having PCOS.[13]

Clinically, PCOS must be differentiated from other conditions. Small follicle syndrome is diagnosed by presence of amenorrhea, anovulation, or oligo-ovulation and imaging findings of polycystic ovary, without clinical and laboratory features of hyperandrogenism. Patients with PCOS, CAH, Cushing's syndrome, hyperprolactinemia, and dysfunctional thyroid disease should not be considered as having small follicle syndrome. An assay of serum hormone of patients with small follicle syndrome will show normal or decreased testosterone levels, normal gonadotropin levels or an elevated ratio of follicle stimulating hormone (FSH) to luteinizing hormone (LH) and cortisol levels. Symptoms of small follicle syndrome include a poor ability to synthesize estrogen in the ovary, resulting in weak negative feedback on FSH level, which causes an increase in the amount of follicles in the ovary. However, these follicles do not grow to maturity as they are defective. If the relative deficiency of testosterone is overlooked, these cases are often misdiagnosed as PCOS, which results in poor efficacy of patient therapy.

3 The type–classification of PCOS

Hyperandrogenism is the main etiology and pathogenesis of PCOS. Excessive androgen is the root cause of disruption in the life network of PCOS patients, which in turn leads to various physiopathologic changes, shown as the triangular diagram of PCOS (Figure 1).[14]

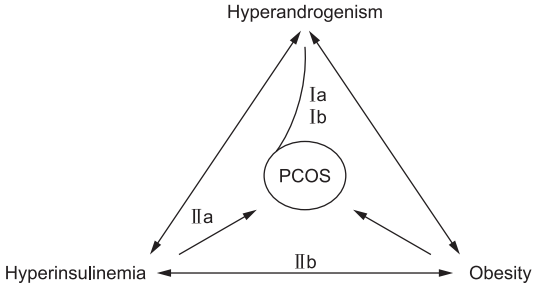

Figure 1 The triangular diagram of PCOS[14]
Hyperandrogenism, hyperinsulinemia and obesity form pathological triangular relationships of PCOS and they influence each other, among which hyperandrogenism is the main point of the triangle. Different types of PCOS have their own characteristics respectively: types Ia and Ib of PCOS mainly exhibit hyperandrogenism, while types IIa and IIb mainly hyperandrogenism and hyperinsulinemia, with obesity being more obvious in type IIb than in type IIa. PCOS: polycystic ovary syndrome.

Patients with hyperandrogenism and a family history of hypertension and DM are more prone to have both hyperandrogenism and hyperinsulinemia. PCOS can be classified into the following types, according to the clinical manifestations and laboratory findings of PCOS patients.[14–16]

3.1 PCOS type I

Hyperandrogenism mainly caused by abnormal expression of cytochrome P450, family 17 (CYP17, mainly 17, 20 cleavage enzyme).[17,18]

3.1.1 PCOS type Ia (serum androgen derived from the ovary)

(1) Clinical manifestations

Symptoms: anovulation with cyclic menstruation, oligomenorrhea, amenorrhea or dysfunctional uterine bleeding and/or infertility and acne.

Signs: hirsutism and acne.

(2) Auxiliary examinations and laboratory inspections

Monophasic basal body temperature, which becomes biphasic after clomifen is taken.

Serum hormone assay: elevated testosterone level or serum log testosterone/estradiol ≥ 0.97, LH:FSH ratio usually > 2.5. Some patients exhibit elevated prolactin levels.

Pelvic ultrasound: polycystic ovaries present.

3.1.2 PCOS type Ib (serum androgen mainly derived from both the ovaries and the adrenal cortex)

(1) Clinical manifestations

Symptoms: amenorrhea or oligomenorrhea and/or infertility; lack of desire to drink water.

Signs: abdominal obesity and stout figure with a buffalo hump, a waist-to-hip ratio (WHR) ≥ 0.8; greasy hair and face; very little acne; large breasts