

REPRODUCTIVE ENDOCRINOLOGY

New guidelines for the diagnosis and treatment of PCOS

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An Endocrine Society-appointed task force has developed an evidence-based clinical practice guideline for the diagnosis and treatment of polycystic ovary syndrome. The guidelines provide suggestions for the management of patients with polycystic ovary syndrome and highlight many areas of uncertainty requiring further scientific efforts.

Orio, F. & Palomba, S. *Nat. Rev. Endocrinol.* advance online publication 10 December 2013; doi:10.1038/nrendo.2013.248

Polycystic ovary syndrome (PCOS) is a common and very heterogeneous condition characterized by clinical and/or biochemical androgen excess, ovulatory dysfunction and polycystic ovaries (PCO).¹ Over the past few years, many groups have prepared papers on various aspects of PCOS: its diagnostic criteria, its short-term and long-term health consequences and its therapeutic management.^{2,3} However, none of these documents were developed using a validated evidence-based approach. A task force appointed by the Endocrine Society has now developed an evidence-based clinical practice guideline on the diagnosis and treatment of PCOS using a well-established scientific approach.³

For the diagnosis of PCOS in adults, the guidelines recommend following the criteria established during the Consensus Conference held in Rotterdam in 2003,¹ that is, two of the following three criteria should be met: clinical or biochemical hyperandrogenism; ovulatory dysfunction; and PCO. This point is particularly interesting in light of the different conclusion reached by the Androgen Excess and PCOS Society using a similar scientific approach based on a systematic review of the literature (use of hyperandrogenism as the main criterion, plus ovarian dysfunction, defined as oligo-ovulation and anovulation, and/or PCO).²

Another important issue is the need to completely evaluate the different features of PCOS. The task force states, “we do not endorse the need for universal screening with androgen assays or ultrasound if patients already meet two of the three criteria clinically”.³ However, an increasing

body of evidence demonstrates the extreme variability in short-term and long-term risks in patients with PCOS.^{4,5}

The diagnosis of PCOS in adolescent, perimenopausal and postmenopausal women is considered elusive as the specific features of PCOS and their combination as diagnostic criteria have not been validated. Although we are probably very far from a solution to the problem, this topic is very important given that early diagnosis and early intervention (for example, lifestyle modifications) in adolescents could modify the natural history of PCOS.

In the guidelines, Legro *et al.*³ emphasize the need to assess the comorbidities associated with PCOS, such as the cutaneous manifestations (hirsutism, acne, alopecia, acanthosis nigricans and skin tags), using grading systems that minimize the subjectivity of the evaluations whenever possible. During the physical examination, assessing BMI and waist circumference is crucial, as obesity (particularly visceral obesity), worsens the severity of the PCOS phenotype and increases the incidence of PCOS-related metabolic risk factors.² A 2-h oral glucose tolerance test using a 75 g oral glucose load is also recommended to screen for impaired glucose tolerance and type 2 diabetes mellitus; rescreening within 5 years is suggested, or earlier in patients with worse clinical features.³

The new guidelines suggest that PCOS is a risk factor for infertility only in the presence of oligoovulation or anovulation. However, there is no clear data of the fertility of patients with PCOS who have normal

ovulatory function. In fact, available meta-analyses and cohort studies seem to suggest that women with PCOS have, at the end of their reproductive life, the same reproductive potential as women without PCOS as a result of a larger ovarian reserve that could affect the duration of the reproductive window during ageing.⁶

The incidence of complications during pregnancy is increased in women with PCOS and seems to be closely related to the features and phenotypes of PCOS, even in patients without obesity who conceived spontaneously and after exclusion of women with multi-fetal pregnancies, which are well-known confounders.⁵ In addition, the paucity of clinical studies on coronary heart disease or ischaemic stroke in PCOS is very interesting, as many intermediate end points of risk factors for cardiovascular disease are present in PCOS, such as obesity, dyslipidaemia and increased blood pressure.⁷

The guidelines also address the treatment of PCOS. No single therapy for PCOS exists; it should be tailored to the patients' and the physicians' therapeutic goals. The guidelines recommend use of hormonal contraceptives as the first-line therapy for menstrual abnormalities, hirsutism and acne in PCOS after screening for contraindications. Oligomenorrhoea is an important symptom in PCOS, particularly in adolescents or young adult women, as its prevalence seems to reduce with ageing. In patients with overweight

Key points

- Polycystic ovary syndrome (PCOS) is a common and very heterogeneous condition characterized by clinical and/or biochemical androgen excess, ovulatory dysfunction and polycystic ovaries
- The use of diagnostic criteria established during the Consensus Conference held in Rotterdam in 2003 are recommended in adults, whereas in adolescent, perimenopausal and postmenopausal women, the diagnostic criteria for PCOS have not been validated
- The treatment of PCOS should be tailored to the patients' and the physicians' therapeutic goals, as no single therapy is currently available