Hyperandrogenism Seen as Central Part of PCOS

BY KATE JOHNSON
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Polycystic ovary syndrome is primarily a disorder of hyperandrogenism—either biochemical or clinical, or both, according to a newly released position statement from the Androgen Excess Society.

"Overall, … women with oligomenorrhea and polycystic-appearing ovaries on ultrasonography but no evidence of hyperandrogenism do not have PCOS," wrote the society's seven-person task force of international experts (J. Clin. Endocrin. Metab. [Epub doi:10.1210/jc.2006-0178]).

The task force also acknowledged a minority opinion that there may possibly be forms of polycystic ovary syndrome (PCOS) "without overt evidence of hyperandrogenism," although "more data are required before validating this supposition."

A diagnosis of hyperandrogenism can be made biochemically by the confirmation of elevated circulating androgens or clinically with the observation of hirsutism, according to Dr. Ricardo Azziz, who chaired the Androgen Excess Society (AES) task force.

"People … often rely heavily on biochemical androgen levels, which is a mistake because it can leave out those patients with hirsutism but normal androgen levels. You have to look at the clinical picture as well," he said in an interview.

The AES position statement, produced after a systematic review of 527 published, peer-reviewed medical articles, is aimed at establishing an evidence-based definition of PCOS, said Dr. Azziz, director of the Center for Androgen-Related Disorders and professor and chair of obstetrics and gynecology at Cedars-Sinai Medical Center at the University of California, Los Angeles.

The position statement stipulates that all three of the following criteria must be present for a diagnosis of PCOS:

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Current Definitions of PCOS Differ

NIH Criteria (1990) Should include:	Rotterdam Criteria (2003) Should include at least two:	AES Statement (2006) Should include:
Hyperandrogenism, biochemical or clinical	Clinical and/or biochemical signs of hyperandrogenism	Hyperandrogenism, either biochemical or clinical or both
Oligo-ovulation	Oligo-ovulation and/or anovulation	Oligo-ovulation or polycystic ovaries or both
Exclusion of other known disorders	Polycystic ovaries	Exclusion of other androgen excess disorders

Source: Journal of Clinical Endocrinology and Metabolism

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- ▶ Hyperandrogenism—either biochemical or clinical, or both.
- ▶ Oligo-ovulation or polycystic ovaries, or both.
- ▶ Exclusion of other androgen excess disorders.

The two definitions that are currently used were established by expert panels—the first at the National Institutes of Health in 1990 and the second, in Rotterdam in 2003. They differ markedly on the necessity of hyperandrogenism for diagnosing PCOS and the relevance of an ultrasound finding of polycystic ovaries. (See box.)

The AES statement is a combination and clarification of the NIH and Rotterdam definitions and the first definition to come out of a review of evidence-based data, Dr. Azziz said. "With this definition, we capture what we think is the majority of patients with PCOS. It is broader than the NIH criteria but doesn't capture as much as the Rotterdam criteria, which were overly broad and resulted in the diagnosis of PCOS in women who simply had irregular ovulation and polycystic-looking ovaries. There may still be a few patients who may not be captured by this definition who in the future may be identified by new tests."

Another important aspect of the statement is its de-emphasis of ultrasound findings in the diagnosis, said Dr. Neil Goodman, a reproductive endocrinologist in private practice in Miami and professor of medicine at the University of Miami. "Up to 20% of women with regular cycles, no hirsutism, and no evidence of androgen excess can have a polycystic ovary appearance on ultrasound," said Dr. Goodman, who is chair of the American Association of Clinical Endocrinologists' task force on hyperandrogenic disorders and was not involved with the AES task force. "We need to document hyperandrogenism before we diagnose PCOS." ■

Race, Ethnicity Influence Heart Risks in PCOS

RANCHO MIRAGE, CALIF. — Cardiovascular risk factors varied considerably by race and ethnicity in women with polycystic ovary syndrome in a large study presented by Dr. Seth L. Feigenbaum at the annual meeting of the Pacific Coast Reproductive Society.

Dr. Feigenbaum, a reproductive endocrinologist in the San Francisco office of the Permanente Medical Group, and associates at the Kaiser Permanente Health Plan of Northern California compared 6,671 women aged 16-44 years who were diagnosed with polycystic ovary syndrome (PCOS) with 26,662 age-matched women in terms of three cardiovascular risk factors: obesity, diabetes, and hypertension.

Two-thirds of women with a diagnosis of PCOS were obese (a body mass index of 30 kg/m^2 or greater), compared with one-third of the age-matched controls. Compared with white women, black and Hispanic women with PCOS were significantly more likely, and Asian women were significantly less likely, to be obese.

Blacks were far more likely than Asians or Hispanics, and somewhat more likely than whites, to be hypertensive. Diabetes was most prevalent in Asians and Hispanics, followed by whites, then blacks. A multivariate regression analysis adjusting for variables showed distinct patterns:

- ▶ Asians had a twofold increased risk of diabetes, compared with whites.
- ▶ Blacks, by an odds ratio of 1.32, were considerably more likely than whites to have hypertension.
- ▶ Hispanics had higher rates of diabetes, but lower rates of hypertension than whites (OR 1.33 and 0.68, respectively).

—Betsy Bates