# Hormone Elevated in Daughters of PCOS Patients

BY MICHELE G. SULLIVAN
*Mid-Atlantic Bureau*

BOSTON — The daughters of women with polycystic ovary syndrome have elevated levels of antimüllerian hormone from infancy to the perimenarchal period, suggesting that the underpinnings of PCOS may be present long before clinical symptoms develop.

Folliculogenesis may be altered in these girls, said Dr. Nicolas Crisosto of the University of Chile, Santiago, at the annual meeting of the Androgen Excess Society.

He compared anthropometric, hormonal, and metabolic parameters in 58 daughters of women with PCOS and in 65 daughters of control women at three time points: early infancy (2-3 months), childhood (4-7 years), and the perimenarchal period (8-15 years).

At each of the three time points, the girls received a physical exam that included assessment of weight, height, waist-to-hip ratio, and sexual development. A panel of tests was performed for serum hormone levels (gonadotropins, sex steroids, sex hormone–binding globulin, and antimüllerian hormone). The girls in perimenarchal group also had a transabdominal ultrasound exam of their ovaries.

There were no significant anthropometric differences between the two groups at any of the exams, Dr. Crisosto said. Antimüllerian hormone levels were significantly increased in the PCOS group at all three stages. Free androgen level was elevated in the PCOS group at the perimenarchal exam. Other values were similar for the two groups.

The mean antimüllerian hormone levels in infants were 20.4 pmol/L in the girls born to women with PCOS vs. 9.2 pmol/L in girls born to women without PCOS. In childhood, the values for the two groups were 14.8 pmol/L and 7.7 pmol/L. In the perimenarchal period, the respective values were 25.2 pmol/L vs. 15.0 pmol/L.

The results of the transabdominal ultrasound showed slightly higher ovarian volume (8.8 $cm^3$ vs. 6.8 $cm^3$) in the daughters of women with PCOS.

The findings, recently published in the Journal of Clinical Endocrinology and Metabolism (DOI:10.1210/jc.2005-2693), led Dr. Crisosto and his colleagues to conclude that serum antimüllerian hormone levels seem to be correlated with the development of preantral and small antral follicles, from puberty to the end of reproductive life. Elevated serum antimüllerian hormone concentrations in daughters of PCOS women during childhood, at a time when the gonadal axis is relatively quiescent and other hormonal markers of ovarian function are very low, suggests that antimüllerian hormone may be used as an early marker of ovarian follicular development. ■




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# PCOS Symptoms May Resolve With Gastric Bypass

BOSTON — Bariatric surgery may resolve symptoms of polycystic ovary syndrome in obese women with the condition, Dr. Héctor Escobar-Morreale reported at the annual meeting of the Androgen Excess Society.

"In some women, the syndrome is so driven by insulin resistance that it may resolve completely with weight loss," said the endocrinologist, of the Hospital Ramón y Cajal in Madrid.

Among women seeking weight-loss advice at his endocrinology practice, Dr. Escobar-Morreale found a PCOS prevalence of 28%, more than five times the prevalence among lean women in Madrid. He then examined the prevalence of the disorder among 36 obese women referred for bariatric surgery. Of this group, 17 (47%) were diagnosed with PCOS.

Follow-up data at 1 year were available on 12 women. By 12 months, the women had lost an average of 41 kg and their hirsutism had resolved. Significant decreases were noted in their sex steroid levels: Total testosterone dropped from a mean of 69 ng/dL to 19 ng/dL, free testosterone from 1.6 to 0.3 ng/dL, androstenedione from 4.1 to 1.5 ng/dL, and dehydroepiandrosterone sulfate from 2,000 to 795 ng/dL.

Insulin sensitivity returned to normal and regular menstruation was restored. Among 10 women who were tested, all had hormonal evidence of ovulation.

**—Michele G. Sullivan**