

## **PCOS Strongly Linked to Autoimmune Thyroiditis: Thyroid function tests advised in PCOS - Prevalence is Fourfold Higher**

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DENVER -- Autoimmune thyroiditis may be four times as common in women with polycystic ovary syndrome as it is in women without PCOS, Dr. Roland Gaertner reported at the annual meeting of the Endocrine Society.

The association was so strong in an age-matched control study of 58 women with polycystic ovary syndrome and 106 healthy controls that Dr. Gaertner of the University of Munich recommended routine thyroid function testing for women with PCOS.

The women in the study were defined as having PCOS based on an LH/FSH ratio in excess of 2, elevated plasma testosterone, oligomenorrhea, hypertrichosis, and, in most patients, ultrasound evidence of polycystic ovaries.

Thyroid status was assessed in patients and controls by measurements of thyroid autoantibodies, free [T.sub.4] and free [T.sub.3], and ultrasound examinations.

Elevated thyroid peroxidase levels or antithyroglobulin antibody levels in excess of 100 U/mL were present in 10% of controls and in 43% (25) of PCOS patients; 20 of these 25 also had an abnormal thyroid ultrasound marked by hypoechogenicity.

In addition, 17% of the PCOS group had clinical autoimmune thyroiditis: eight were on L-thyroxine and two had undergone surgery for Graves' disease.

Free thyroid hormone and TSH levels, however, were normal in all PCOS patients and controls.

Women are known to have a 5- to 10- fold greater incidence of organ-specific autoimmune diseases than men. This raises the possibility that female hormones might play a pathogenic role in such disease. It's particularly intriguing that the incidence of autoimmune thyroiditis is known to be roughly twice as great during perimenopause--a time of low progesterone and substantial estrogen--as in the reproductive years. Low progesterone is also a hallmark of anovulatory women with PCOS.

These observations raise a testable hypothesis: Perhaps administration of progesterone or progesterone derivatives that specifically target immunocompetent cells might prevent autoimmune thyroiditis in women with PCOS, Dr. Gaertner said.

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