PCOS Patients' Brothers Share Metabolic Traits

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BOSTON — Brothers of women with polycystic ovary syndrome share with their sisters similar metabolic features that indicate they may be at increased risk for decreased insulin sensitivity and glucose tolerance, high triglycerides, and dyscoagulability, Dr. Jean-Patrice Baillargeon said at the annual meeting of the Androgen Excess Society.

These characteristics, which are independent of both fat percentage and body mass index, suggest that polycystic ovary syndrome (PCOS) may represent an inherited constellation of symptoms that are expressed differently in men and women, said Dr. Baillargeon of the University of Sherbrooke (Que.).

He compared insulin sensitivity and other metabolic measures in 17 brothers of women with PCOS and 28 men who had no first-degree relatives with PCOS. Their average age was 28 years. There were no significant differences in body mass index (average 26.5 kg/m^2) or percentage of body fat (average 22%). Levels of total and free testosterone and dehydroepiandrosterone sulfate were also similar for the two groups.

At baseline, brothers had significantly higher levels of triglycerides (1.66 vs. 0.99 mmol/L), plasminogen activator inhibitor-1 (27 vs. 16 nmol/L), and factor VIII (27 vs. 16 nmol/L). "The increased PAI-1 and factor VIII show a dyscoagulability in the brothers," Dr. Baillargeon said.

Three of the brothers (18%) had decreased insulin sensitivity after an oral glucose tolerance test; insulin sensitivity values were normal in all controls. The 2-hour glucose levels, insulin area under the curve, and glucose area under the curve were also significantly higher in brothers of women with PCOS. "The insulin sensitivity of the brothers was 38% less than that of the controls," Dr. Baillargeon noted. ■