Girls With PCOS Prone to CVD, Diabetes

BY ALICE GOODMAN

THE ANNUAL MEETING OF THE American college of obstetricians And gynecologists

WASHINGTON – Girls and young women with polycystic ovary syndrome appear to share common features that include obesity, a strong family history of type 2 diabetes, cardiovascular disease, and acanthosis nigricans, according to a retrospective case series from researchers at Howard University Hospital in Washington.

"These findings are not new, but they

Major Finding: Seventy-one percent of the females with PCOS had acanthosis nigricans, 75% had a family history of type 2 diabetes, 71% had a family history of

betes, 71% had a family history of cardiovascular disease, and 87% had a BMI greater than 26 kg/m².
Data Source: A retrospective case

series of 24 PCOS patients aged 9-19 years.

Disclosures: Dr. Green and Dr. Broomfield said they had no relevant financial disclosures.

are striking, considering how common they were," said lead author Dr. Lisa Green.

"For example, more than two-thirds of adolescents with PCOS [polycystic ovary syndrome] were found to have acanthosis nigricans, which is a marker of hyperinsulinemia."

If uncorrected, hyperinsulinemia may leads to type 2 diabetes in these patients, said Dr. Green.

"The findings underline the importance of recognizing and treating PCOS in adolescents, who are predisposed to developing type 2 diabetes, cardiovascular disease, endometrial hyperplasia, and cancer," Dr. Green said at the meeting.

"Parents of adolescents known to have PCOS should be counseled appropriately regarding these risks," she added.

PCOS is a common disorder, occurring in 5%-10% of all females aged 12-45 years, she noted, but the causes are unknown, and the diagnosis is based on clinical findings.

"The diagnosis of polycystic ovary syndrome is more difficult or delayed in the adolescent population because clini-

INDEX OF ADVERTISERS

Amylin Pharmaceuticals, Inc. and Lilly USA, LLC Byetta 3-5 Boehringer Ingelheim Pharmaceuticals, Inc. Tradienta 11 Corporate 26-27 Bristol-Myers Squibb Onglyza 16-18 Corporate 21 Lilly USA, LLC 7 Corporate Novo Nordisk 31-32 NovoLog

cal findings, such as irregular menstrual cycles and acne, are normal among this population," Dr. Green said in an interview.

The study identified 24 females aged 9-19 years who were diagnosed with PCOS between 2007 and 2009 using the Rotterdam criteria: 71% had acanthosis nigricans, 75% had a family history of type 2 diabetes mellitus, 71% had a family history of cardiovascular disease, and

87% had body mass index greater than $26\ kg/m^2.$

The study is limited by its size and lack of control group. Dr. Green and her colleagues plan to conduct future studies to validate the strength of their observations.

"Knowing that adolescents with PCOS have significant underlying risk factors for type 2 diabetes mellitus and cardiovascular disease makes it imperative that we conduct additional studies to ascertain if treatment with insulin-sensitizing agents and the like will decrease their risk of subsequently developing diabetes," according to senior author Dr. Diana Broomfield.

"If so, then it would be more prudent to treat them with these drugs, rather than simply to put then on oral contraceptive pills for menstrual cycle management," she said.

IN TYPE 2 DIABETES MELLITUS THERE COULD BE DANGER BELOW

Renal impairment is the leading microvascular complication associated with type 2 diabetes (over 40%), followed by retinopathy (28.5%) and neuropathy (19.4%)—it is important to recognize these complications as soon as possible¹⁻⁴

- Microalbuminuria (albumin in the urine 30 mg/day or 20 µg/min) is the earliest clinical evidence of renal disease⁵
- Regular dilated eye examinations can be effective in detecting vision-threatening diabetic retinopathy^{6,7}
- Because diabetic neuropathy may be asymptomatic in about 50% of patients, it is important to conduct a physical examination of lower extremities and feet annually^{6,8}

References: 1. Plantinga LC, Crews DC, Coresh J, et al; for the CDC CKD Surveillance Team. Prevalence of chronic kidney disease in US adults with undiagnosed diabetes or prediabetes. *Clin J Am Soc Nephrol.* 2010;5(4):673-682. 2. Parving H-H, Lewis JB, Ravid M, Remuzzi G, Hunsicker LG; for the DEMAND Investigators. Prevalence and risk factors for microalbuminuria in a referred cohort of type II diabetic patients: a global perspective. *Kidney Int.* 2006;69:2057-2063. **3**. Zhang X, Saaddine JB, Chou C-F, et al. Prevalence of diabetic retinopathy in the United States, 2005-2008. *JAMA.* 2010;304(6):649-656. **4**. Gregg EW, Gu Q, Williams D, et al. Prevalence of lower extremity diseases associated with normal glucose levels, impaired fasting glucose, and diabetes among U.S. adults aged 40 or older. *Diabetes Res Clin Pract.* 2007;77(3):485-488. **5**. American Diabetes Association. Nephropathy in diabetes. *Sciabetes Care.* 2011;34(suppl 1):511-561. **7**. Fong DS, Ferris FL, Aiello LP, Klein R. Diabetic retinopathy. *Diabetes Care.* 2004;27(10):2540-2553. **8**. Boulton AJM, Arezzo JC, Malik RZ, et al. Diabetic somatic neuropathies. *Diabetes Care.* 2004;27(6):1458-1486.

26