Obese Children May Face Heart Failure in Their 20s

BY BETSY BATES
Los Angeles Bureau

SNOWMASS, COLO. — The complications of type 2 diabetes mellitus are occurring so rapidly in children that cardiologists should brace for seeing congestive heart failure patients dying in their 40s, an endocrinologist predicted at a conference sponsored by the Society for Cardiovascular Angiography and Interventions.

"It doesn't take 15 years for the complications [of pediatric type 2 diabetes] to develop," stressed Dr. Kathleen Wyne, who serves in the division of endocrinology and metabolism at the University of Texas at Dallas.

About 10 years ago, when obese youth and adolescents began being diagnosed with type 2 diabetes, endocrinologists predicted it would take many years for them to develop hypertension, albuminuria, retinopathy, and cardiovascular complications of the disease because, unlike their adult counterparts, they did not have a decade or more of preceding insulin resistance.

'If I've got grandparents in their 40s and 50s with diabetes and heart disease and they have a fat little [grand]kid, I know that kid is heading in that direction.'

That's turning out to be a false assumption, and children with type 2 diabetes are demonstrating "all of the complications we see in adults," within 5-6 years of their diagnoses, Dr. Wyne said at the meeting, also sponsored by the American College of Cardiology.

Compared with adolescents who have type 1 diabetes, those with type 2 diabetes have more obesity, overweight, hypertension, high triglycerides, low HDL cholesterol, microalbuminuria, and retinopathy. "Once you start seeing [those symptoms], you know the process has already started, and you need to look for other complications," said Dr. Wyne.

By putting numbers on the problem, Dr. Wyne reported that in Dallas County alone, children seen in outpatient clinics for obesity, dietary surveillance, abnormal weight gain, or acanthosis nigricans soared from 665 in 2001 to 1,378 in 2005. Diagnoses of type 2 diabetes more than doubled, from 69 to 137.

Texas academic centers are currently seeing 250 children a year with type 2 diabetes, aged 4-16 years. "This is not a disease of kids postpubertal. This goes the full range of kids' [ages]," she said.

If an estimated one-third of adults with diabetes are undiagnosed, then the percentage could be much higher in children, according to Dr. Wyne. Based on obesity rates among the 1 million children in Houston, for example, there could be 5,600 children with "silent" type 2 diabetes in that city alone, she said.

One practical suggestion to prevent cardiovascular catastrophes in young adults is to screen children early and screen them often, using two important risk factors: a family history of diabetes and obesity.

Lifestyle interventions are the first line of therapy of youth and adolescents, just as in adults. Almost always, the whole family is involved in dietary and exercise patterns that put them at risk for diabetes, so interventions must be familywide.

If those steps fail to produce results, Dr. Wyne said she prescribes ACE inhibitors, statins, and angiotensin II receptor blockers (ARBs) to symptomatic teenagers and younger children. "What I don't know [is how to treat] newly diagnosed youth and adolescents who have no complications yet," she said.

Often, she makes emotional appeals to the parents and grandparents of children who seem destined for the cardiac catheterization laboratory in young adulthood.

"If I've got grandparents in their 40s and 50s with diabetes and heart disease and they have a fat little [grand]kid, I know that kid is heading in that direction," she said.

County hospitals in Texas are currently seeing patients with congestive heart failure in their 30s, 40s, and 50s, said Dr. Wyne. She's been diagnosing elementary school children with type 2 diabetes for 10 years, and they're been developing complications in 5-6 years.

The math suggests that some of these children will develop heart failure in their 20s and 30s, she said. "A few years ago, it struck me that this is going to be a generation in which parents are burying their children." ■