

Evaluate Patients With PCOS for Sleep Apnea

Women with the treatable breathing disorder had higher fasting insulin levels than those without it.

BY ROBERT FINN
San Francisco Bureau

SAN FRANCISCO — A high risk for sleep apnea was common in women with polycystic ovary syndrome and was linked to high fasting insulin levels, Dr. Esra Tasali reported at a conference sponsored by the American Diabetes Association.

Women with PCOS and normal glucose tolerance who were at high risk for sleep apnea and were given oral glucose showed insulin levels that were twice those of women with lower risk for sleep apnea.

This finding suggests that sleep apnea might worsen the metabolic consequences of insulin resistance, accelerating the conversion from normal to impaired glucose tolerance, Dr. Tasali said.

Although the study does not establish causation, Dr. Tasali recommended that women with PCOS be systematically evaluated for sleep apnea, because its treatment might improve glucose metabolism.



A high risk for sleep apnea was observed in 30 of 40 women with PCOS, and 92% of the women had sleep problems, according to Dr. Tasali and her colleagues at the University of Chicago (J. Clin. Endocrinol. Metab. 2006;91:36-42).

Of the 40 women, 32 had previously been given an oral glucose tolerance test. Glucose tolerance was normal in 19 women. In 22 women at high sleep apnea risk, average fasting insulin levels

were significantly higher (168 pmol/L) than they were in the 10 women at low apnea risk (97 pmol/L).

Among the 13 women with impaired glucose tolerance, glucose and insulin levels did not differ depending on the level of apnea risk.

Another cohort of eight women with PCOS underwent overnight polysomnography for symptoms suggestive of obstructive sleep apnea. Mean sleep efficiency was 80% in the women with PCOS, compared with 92% in a control group of age-matched, nonobese women. The women with PCOS also had significantly longer mean sleep latency (41 minutes vs. 10 minutes), and significantly shorter total sleep time (323 minutes vs. 442 minutes, a difference of almost 2 hours).

"Sleep apnea might be an intrinsic component of the metabolic disturbances that appear with polycystic ovary syndrome," said Dr. Tasali.

Furthermore, severity of sleep apnea as measured by the apnea-hypopnea index, and the degree of oxygen desaturations during rapid-eye-movement sleep, accounted for more than 90% of the variability in measures of glucose tolerance including hemoglobin A_{1c} levels.

Together, these findings could mean that both glucose tolerance and sleep apnea are strongly influenced by a common mechanism in women with PCOS.

Dr. Tasali disclosed no conflicts of interest related to her presentation. ■

'Apnea might be an intrinsic component of the metabolic disturbances that appear with [PCOS].'

DR. TASALI

Diabetics Face Highest Stroke Risk Shortly After Diagnosis

BY MICHELE G. SULLIVAN
Mid-Atlantic Bureau

KISSIMMEE, FLA. — Stroke risk is highest in the first years after receiving a diagnosis of type 2 diabetes, with a 17-fold higher risk for patients aged 18-34 years old, researchers reported at the 31st International Stroke Conference.

The findings underscore the importance of early and aggressive management of cardiovascular risk factors in diabetic pa-

tients, especially the triumvirate of obesity, hypertension, and high triglyceride levels that constitute metabolic syndrome, said Dr. Thomas J. Jeerakathil of the University of Alberta, Edmonton.



"This should be a real wake-up call that cardiovascular risk factors in diabetics need to be tackled from the very beginning. There is a real up-front risk," he said at the meeting sponsored by the American Stroke Association.

Both Dr. Jeerakathil and Dr. Brett M. Kissela of the University of Cincinnati undertook population-based epidemiologic studies of stroke in people with diabetes.

Dr. Jeerakathil's study included 12,272 patients in Saskatchewan who received a new prescription for oral hypoglycemic medication in 1991-1996, indicating newly diagnosed diabetes. The patients' average age was 64 years, and the average follow-up was 5 years.

During that time, 9% experienced a hospital admission for stroke and 22% of the entire cohort died. The rate of stroke was 1,025/100,000 person-years—double the rate seen in the general population (499/100,000 person-years).

Dr. Kissela's study also concluded that strokes were occurring earlier in diabetic patients than in nondiabetic patients.

He used a large Ohio medical database to compare the incidence of ischemic stroke in those with diabetes to those without diabetes. Of 2,432 patients who had strokes in 1999, 33% had a history of diabetes. Patients with diabetes and stroke were younger (70 vs. 73 years), likelier to be black (25% vs. 15%), and likelier to have a history of hypertension (82% vs. 66%), high cholesterol levels (31% vs. 18%), and myocardial infarction (19% vs. 12%).

In both whites and blacks with diabetes, the increased risk of stroke was highest in those under age 55. White diabetics aged 18-34 had a 17-fold increase over the general population. The risk ratio was 8 in those aged 35-44,

and 6 in those aged 45-54. For blacks, the increased risk was again highest for the youngest patients (8.5-fold increase). For those aged 35-44, the risk ratio was 7.5, and it was doubled for those aged 45-54.

The increased risk of stroke in young diabetics, coupled with the increased incidence of metabolic syndrome signs, should be a red flag for physicians who have focused on glycemic control and the prevention of microvascular disease, said Dr. Kissela.

"Glycemic control is important, but it's not enough. These patients are at great risk and need to be aggressively managed with weight control, blood pressure control, and lipid control."

Previous studies have shown that diabetes patients benefit even more than the general population from hypertension control, Dr. Jeerakathil added. "In the average population, if you lower blood pressure by 10 points, you lower the risk of stroke by 40%. But in diabetics, the same 10 points will lower the risk of stroke by 60%. They get more bang for the buck," he said. ■

'This should be a real wake-up call that cardiac risk factors in diabetics need to be tackled from the very beginning.'

DR. JEERAKATHIL

Tracking FSH Annually Helps Predict Bone Density Loss in Perimenopause

Tracking FSH levels each year from premenopause on can help predict bone loss during menopause, reported MaryFran R. Sowers, Ph.D., of the University of Michigan, Ann Arbor, and her associates.

They conducted what they called the first study to longitudinally characterize bone mineral density (BMD) loss at the spine and hip in conjunction with changes in reproductive hormone concentrations. The interaction between baseline FSH level before menopause and serial FSH levels measured every year thereafter predicted bone loss. However, this interaction "is complex, requires at least two FSH values,

and may be challenging to apply in a busy clinical setting," they cautioned.

The study comprised 2,311 women aged 42-52 at baseline who were assessed at several medical centers across the United States for 5 years. Half the women were white, 28% were African American, and 22% were Asian American.

The women underwent annual spine, femoral neck, and total hip BMD assessments with densitometers. Blood samples obtained annually in the early follicular phase of the menstrual cycle were analyzed for estradiol, FSH, testosterone, sex hormone-binding globulin (SHBG),

and dehydroepiandrosterone sulfate (DHEAS) content.

At baseline, 53% were classified as premenopausal due to no reported drop in menstrual regularity in the preceding year; 47% were grouped in the "early perimenopausal" period, having reported less menstrual regularity in the last 3 months (J. Clin. Endocrin. Metab. doi:10.1210/jc.2005-1836; Jan. 10, 2006).

The interaction between baseline FSH levels and subsequent levels predicted bone loss. Estradiol levels measured throughout this transitional period "were poor predictors of incremental BMD change."

—Mary Ann Moon

Continuous Insulin Best in Pregnant Type 1 Diabetics

MIAMI BEACH — Continuous subcutaneous insulin lispro infusion seems to be superior to multiple daily insulin lispro injections for the treatment of pregnant women with type 1 diabetes, Dr. Giorgio Mello said at the annual meeting of the Society for Maternal-Fetal Medicine.

In a randomized controlled study of 71 pregnant women with type 1 diabetes and 142 matched, nondiabetic, pregnant controls, continuous subcutaneous insulin infusions (CSII) were found to mimic more closely than multiple daily injections (given as a premeal bolus) the normal postprandial glucose excursion pattern, said Dr. Mello of

the University of Florence, Italy.

Patients in both groups had similar average daily glucose levels. However, at 16-, 26-, and 36-week evaluations, those in the CSII group had 24-hour glycemic profiles similar to the normal group; those in the multiple daily injections group had a significantly longer time period in the three-meal postprandial areas.

Fetuses in the CSII group, but not in the multiple daily injection group, had growth patterns similar to those of controls, as measured by ultrasound scans performed every 2 weeks between 25 and 38 weeks' gestation, Dr. Mello noted.

—Sharon Worcester