

Metabolic Syndrome Dx Upheld by Heart Groups

BY CHRISTINE KILGORE
Contributing Writer

Less than a month after two major diabetes organizations called metabolic syndrome a poorly defined and misleading diagnosis, the American Heart Association and the National Heart, Lung, and Blood Institute issued a joint statement reaffirming that the syndrome is valid and clinically useful.

The new AHA/NHLBI scientific statement basically confirms the recommendations on diagnosis and management of metabolic syndrome that were issued in 2001 as part of the National Cholesterol Education Program (NCEP) Adult Treatment Panel III (ATP III) report.

The statement also clarifies some issues and provides some minor modifications to the ATP III definition of the metabolic syndrome—a term that denotes the clustering of interrelated metabolic risk factors for atherosclerotic cardiovascular disease.

Compared with the joint statement published last month by the American Diabetes Association and the European Association for the Study of Diabetes (“Term ‘Metabolic Syndrome’ Called Into Question,” FAMILY

PRACTICE NEWS, Sept. 1, 2005, p. 5), the AHA/NHLBI statement offers a clearly different perspective on the meaning and value of a term that’s now commonplace in the medical literature.

“Metabolic syndrome is a valuable clinical tool. Physicians must pay attention to it, and they must give enough attention to lifestyle (intervention),” said Scott M. Grundy, M.D., director of the Center for Human Nutrition at the University of Texas Southwestern Medical Center in Dallas. Dr. Grundy chaired the panel that wrote the joint statement.

While the diabetes organizations questioned the value of the syndrome as a predictor of cardiovascular disease—they said, for instance, that it’s “uncertain” whether it’s a useful marker of cardiovascular disease risk “above and beyond the risks associated with its individual components”—the AHA/NHLBI panel maintained that it’s an important and useful predictor.

The absolute short-term (10-year) risk for major coronary heart disease events is not necessarily high—and may be best assessed by Framingham risk scoring—but the longer-term risk associated with the metabolic syndrome is “undoubtedly” ele-

vated, regardless of the Framingham score, the panel said (Circulation 2005;DOI:10.1161/circulationaha.105.169404).

“The long-term risk is more than the sum of the parts—the risk multiplies,” said Dr. Grundy. “Nobody is asserting that metabolic syndrome is a disease. No one is saying it’s a unified entity. It’s a group of factors that tend to cluster together, and the diagnosis gives physicians an opportunity to identify people at long-term risk,” said James I. Cleeman, M.D., cochair of the panel and coordinator of the NHLBI’s National Cholesterol Education Program.

“There’s no question that risk increases when these risk factors (cluster),” he said in an interview.

Overall, the syndrome increases the risk for atherosclerotic cardiovascular disease 1.5-3 times and raises the risk for type 2 diabetes 3-5 times, he and Dr. Grundy said in an interview. The new statement essentially “ties up loose ends” and synthesizes information presented at NIH-sponsored conferences held after the ATP III report was released.

The statement maintains the same diagnostic criteria for metabolic syndrome—elevated waist circumference, elevated trigly-

cerides, reduced HDL-C, elevated blood pressure, and elevated fasting glucose—and the requirement that three of the five criteria be present for a diagnosis.

It also offers the following modifications and clarifications:

► The threshold for elevated fasting glucose is reduced from 110 to 100 mg/dL, in accordance with the ADA’s recently revised definition.

► Triglycerides, HDL-C levels, and blood pressure may be counted as abnormal when a patient is taking drug treatment for these factors.

► The threshold for waist circumference (102 cm in men and 88 cm in women) may be lowered in individuals or ethnic groups, particularly Asian Americans, who are prone to insulin resistance.

The panel maintained that individuals who have established atherosclerotic cardiovascular disease or type 2 diabetes can still have the metabolic syndrome—a position that is at odds with the ADA-EASD statement.

The modified ATP III definition is almost identical to the definition released—also last month—by the International Diabetes Federation, Dr. Cleeman said. One difference is that the IDF requires the presence of ab-

dominal obesity for diagnosis.

More research is needed on the most appropriate therapies for patients with the metabolic syndrome, but for now the “prime emphasis” should be on lifestyle interventions, the joint statement said. Drug therapies for specific risk factors “may be indicated” when lifestyle changes are not sufficient.

It cautions, however, against prescribing drugs that purportedly target underlying causes of the syndrome (namely obesity and insulin resistance) until evidence is sufficient.

While the AHA/NHLBI statement was in the works before the ADA and EASD released their joint statement, the effort by the diabetes organizations sent at least one other group scrambling.

The American Association of Clinical Endocrinologists last month had a “rapid-response task force” reviewing its 2003 position paper on what it calls the “insulin resistance syndrome.”

“With the critical appraisal by the ADA, we want a well-thought-out, evidence-based response to clarify our position (on the issue),” said Jeffrey I. Mechanick, M.D., an endocrinologist who is leading the task force. ■

Stress Reduction May Benefit Heart Disease, Diabetes Patients

BY MIRIAM E. TUCKER
Senior Writer

WASHINGTON — Increasing evidence suggests that patients with chronic conditions such as diabetes and heart disease who receive “coping skills” training do better physically and mentally, Redford B. Williams, M.D., said at the annual meeting of the American Association of Diabetes Educators.

Stress and the negative emotions that diabetes engenders can impair control of the disease and increase the risk for major complications, as well as increase the risk of death after myocardial infarction. The exact mechanisms are not known, but



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DR. WILLIAMS

are likely related to changes in sympathetic nervous system activity and cortisol secretion, which could in turn increase depression and lead to noncompliance, said Dr. Williams, director of the Behavioral Medicine Research Center at Duke University, Durham, N.C.

On the positive side, randomized trials have shown that coping skills training—also known as stress reduction, stress management, or a host of other names—reduces psychosocial risk factors and biomarkers of

stress such as blood pressure and vascular reactivity. This training may improve metabolic control in diabetic patients, said Dr. Williams, who is also professor of psychiatry, medicine, and psychology at Duke.

“It’s not a substitute for diet, exercise, glucose monitoring, and medications,” he said. “Managing the stress of everyday life is another leg of the stool of good diabetes management.”

Among the coping skills programs for which positive data are emerging is Williams LifeSkills Inc., founded by Dr. Williams and his wife, Virginia P. Williams, Ph.D. He serves as chairman of the organization, and she is president.

Among 60 patients who had undergone coronary artery bypass grafting, 30 were randomized to receive six sessions of LifeSkills training; the other 30 listened to a 1-hour lecture on the effects of stress on the heart. Baseline scores on the Center for Epidemiological Studies Depression Scale (CES-D) were 11.1 in the intervention group and 13.7 in the control group, which was not significantly different. After the intervention, the mean CES-D score in the LifeSkills group dropped to 7.2, while it rose to 16.9 in the control group, a significant difference. At

3 months, the CES-D score in the controls had risen to 17.6, which is considered clinical depression, while it had dropped even further, to 4.3, in the LifeSkills group.

Similar differences were seen in questionnaire measures of trait anger, perceived stress, satisfaction with social support, and satisfaction with life. In all cases, the LifeSkills group improved even further at 3 months while the controls worsened with time. Such findings suggest that when it comes to patients with heart disease or diabetes, “we don’t need to label patients as depressed or anxious. Everybody needs this kind of training,” Dr. Williams said.

Systolic blood pressure fell among those who received LifeSkills training, from a mean of 122.3 mm Hg at baseline to 118.7 mm Hg post intervention to 118.3 mm Hg at 3 months. In contrast, among control patients, SBP rose from 118.8 mm Hg at baseline to 124.1 mm Hg post intervention to 126.9 mm Hg at 3 months. Similarly, resting heart rate in the LifeSkills group dropped from 72.1 beats per minute to 65.2 post intervention and 65.4 at 3 months. In the controls, resting heart rate remained essentially the same throughout (73.8 to 73.6 to 74.9 bpm).

Systolic blood pressure reactivity to anger recall—when a patient is reminded of a previous anger-inducing situation—also differed between the groups, dropping from 26.1 mm Hg at baseline to 16 mm

Hg post intervention to 11.4 mm Hg at 3 months in the LifeSkills group, while rising from 21.5 to 23.1 to 27.7 mm Hg in the controls.

The LifeSkills program hasn’t been studied specifically in diabetic patients, but other findings suggest that they could benefit from such training.

In a study led by Dr. Williams’ colleague at Duke, Richard Surwit, Ph.D., scores on the Cook-Medley hostility scale were significantly correlated with glucose metabolism in nondiabetic patients (Diabetes Care 2002;25:835-9).

Lifeskills training, which has also been shown to decrease hostility scores, might therefore reduce glucose levels in diabetic patients as well, Dr. Williams said.

Further evidence supporting that notion came from another study from the same group, in which Dr. Williams was a coinvestigator. A group of 108 patients with type 2 diabetes was randomized to undergo a five-session group diabetes education program with or without a stress management training program similar to LifeSkills. Hemoglobin A_{1c} levels didn’t differ in the first 6 months, but after 12 months there was a small yet significant difference (7.2% vs. 7.7%) between those who received stress management and the controls (Diabetes Care 2002;25:30-4). These data suggest that it may take some time before the impact of stress management is reflected in certain biological markers, he noted. ■