Meditation Helps Vascular Function in Black Teens

BY MIRIAM E. TUCKER
Senior Writer

VANCOUVER, B.C. — Transcendental meditation may improve vascular function in African American teenagers with high-normal blood pressure, Vernon A. Barnes, M.D., said at the annual meeting of the American Psychosomatic Society.

Transcendental meditation (TM), a process by which “the mind is allowed to settle down to a state of least mental activity,” has been shown to decrease sympathetic nervous system tone, hypothalamic-pituitary-adrenocortical axis activation, and cortisol levels, which are associated with reductions in blood pressure.

In a study by Dr. Barnes and his associates at the Medical College of Georgia, Augusta, systolic and diastolic blood pressure were significantly reduced in 50 African American adolescents with high-normal blood pressures who practiced TM twice a day for 4 months (Am. J. Hyptertens. 2004;17:366-9).

In that study, 67 African American adolescents (mean age 16.2 years) were randomized to practicing TM for 15 minutes at a time. One session was held in school during homeroom, the other was at home.

Another 54 teens received 15-minute didactic health education sessions about weight management, healthy diet, and physical activity each day at school, and also were assigned to walk 15 minutes a day.

At-home compliance with the meditation—in which “the ordinary thinking process becomes quiescent and a distinctive wakeful but deeply restful state” is achieved—approached 76% on weekends and holidays, Dr. Barnes told FAMILY PRACTICE NEWS.

Echocardiographic-derived measures of the subjects’ endothelium-dependent vasodilatation to reactive hyperemia (EDAD)—a functional measure of vascular remodeling that is inversely correlated with cardiac structure and function—were obtained.

In the TM group, EDAD was calculated as the percentage change from baseline diameter to maximum post-cuff release diameter. The sonographer was blinded to which group the subject was in, Dr. Barnes said.

From pre- to 4 months post intervention, EDAD in the TM group increased 21%, from 12.4% to 15%, compared with a 4% decrease of 12.3% to 11.8% in the health education group.

“If this improvement is replicated among other at-risk groups and in cohorts of cardiovascular disease patients, this will have important implications for inclusion of TM in the efforts to prevent and treat CVD and its clinical consequences,” he said.

Other benefits were seen as well. Anecdotes related by students corroborated school records documenting improved school-related behavior and fewer rule violations. Students also saw improvements in sleep, attention, and personal relationships, Dr. Barnes said.

This study, funded by the National Heart, Lung, and Blood Institute, was presented to the psychosomatic society at the annual meeting of those “having the highest potential to change clinical practice.”

About 2% of African Americans on ACE Inhibitor Develop Angioedema

BY MITCHEL L. ZOLER
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ORLANDO, Fla. — About 2% of African Americans treated with an ACE inhibitor develop angioedema in the first 6 months on the drug, according to results from a prospective study of enalapril with more than 12,000 patients.

Although angioedema is a known potential adverse effect of treatment with an ACE inhibitor, prior findings never established the risk patients face in a prospective, controlled study, John B. Kontsi, M.D., said while presenting a poster at the annual meeting of the American College of Cardiology. Among whites, about 0.5% developed angioedema in the first 6 months of treatment with enalapril.

Patients who developed angioedema most commonly had a body mass index of less than 25 kg/m², Dr. Kontsi said. In African Americans, the risk was about 0.3% in that BMI category.

What factors contributed to this difference? Risk factors included atenolol-use, diuretic use, and history of angioedema or urticaria.

Risk of angioedema increased with use of the diuretic hydrochlorothiazide, Dr. Kontsi said, which is frequently used with enalapril.

The risk was also greater for patients who were of normal weight—that is, having a BMI of at least 40 kg/m², respective ly, the adjusted risk was 71% greater in thin patients and 80% greater in those with class II-III obesity (defined by a BMI of 35-39.9 kg/m² or at least 40 kg/m², respectively), the adjusted risk of the primary end point was 35% greater than in normal-weight individuals, he said.

The differences in outcome based on body build were even more striking with respect to cardiovascular mortality, which occurred in 432 LIFE participants. The adjusted risk was 71% greater in thin patients and 80% greater in those with class II-III obesity than in normal-weight hypertensive patients.

Losartan-based therapy was associated with a highly significant 15% reduction in the primary composite end point relative to atenolol-based treatment, regardless of BMI category.

Results of this analysis underscore the necessity of particular aggressive control of blood pressure and other cardiovascular risk factors in hypertensive patients at the extremes of body build distribution, Dr. de Simoni concluded.