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Diet, Weight Loss, and Exercise a Potent Combo

BY MITCHEL L. ZOLER

ORLANDO — Weight loss and exercise were effective complements to a low-salt and low-fat diet for driving down blood pressure in patients with mild hypertension in a controlled study with about 150 people.

The combined exercise, weight loss, and healthy-diet regimen led to an average systolic blood pressure reduction of

16 mm Hg during 16 weeks of treatment, Dr. Alan L. Hinderliter said at the annual meeting of the American College of Cardiology.

The combined lifestyle regimen also led to significant improvements in several other health measures, including aerobic capacity, left ventricular mass, vascular stiffness, and glucose tolerance, said Dr. Hinderliter, a cardiologist at the University of North Carolina, Chapel

Hill. "The results reinforce the importance of exercise and weight loss as part of a comprehensive lifestyle modification strategy in people with high blood pressure," he said.

The Exercise and Nutritional Interventions for Cardiovascular Health (ENCORE) study enrolled patients with a blood pressure of 130-159/85-99 mm Hg who were older than 35 years of age, had a body mass index of 25-40 kg/m²,

and did not perform any regular exercise. The participants also could not be on any antihypertensive medication, and did not have secondary hypertension, cardiac disease, diabetes, or chronic kidney disease. The enrolled patients had an average age of about 51, about two-thirds were women, about 60% were white and about 40% were African American. Their average blood pressure was about 138/85 mm Hg.



Lexiscan® (regadenoson) injection is a pharmacologic stress agent indicated for radionuclide myocardial perfusion imaging (MPI) in patients unable to undergo adequate exercise stress.

IMPORTANT SAFETY INFORMATION

Do not administer Lexiscan to patients with second- or third-degree AV block or sinus node dysfunction unless these patients have a functioning artificial pacemaker.

Fatal cardiac arrest, life-threatening ventricular arrhythmias, and myocardial infarction may result from the ischemia induced by pharmacologic stress agents. Cardiac resuscitation equipment and trained staff should be available before administering Lexiscan.

Adenosine receptor agonists, including Lexiscan, can depress the SA and AV nodes and may cause first-, second-, or third-degree AV block, or sinus bradycardia requiring intervention. In postmarketing experience, heart block (including third degree), and asystole within minutes of Lexiscan administration have occurred.

Adenosine receptor agonists, including Lexiscan, induce arterial vasodilation and hypotension. The risk of serious hypotension may be higher in patients with cardiac or cerebrovascular insufficiency. In postmarketing experience, syncope, symptomatic hypotension, and transient ischemic attacks have been observed. Decreased systolic blood pressure (>35 mm Hg) was observed in 7% of patients and decreased diastolic blood pressure (>25 mm Hg) was observed in 4% of patients within 45 minutes of Lexiscan administration.

Adenosine receptor agonists, including Lexiscan, may cause bronchoconstriction and respiratory compromise. For patients with known or suspected bronchoconstrictive disease, chronic obstructive pulmonary disease (COPD), or asthma, appropriate bronchodilator therapy and resuscitative measures should be available prior to Lexiscan administration.

Lexiscan overdosage may result in serious reactions. Aminophylline was used as a reversal agent in 3% of patients.

The most common adverse reactions (≥5%) to Lexiscan are dyspnea, headache, flushing, chest discomfort, angina pectoris or ST-segment depression, dizziness, chest pain, nausea, abdominal discomfort, dysgeusia, and feeling hot. Most adverse reactions began soon after dosing, and generally resolved within approximately 15 minutes, except for headache, which resolved in most patients within 30 minutes.

In postmarketing experience, abdominal pain in association with nausea, vomiting, or myalgias, and diarrhea, fecal incontinence, and musculoskeletal pain, have occurred.

PLEASE SEE FOLLOWING PAGE FOR BRIEF SUMMARY OF PRESCRIBING INFORMATION.

Dr. Hinderliter and his associates randomly assigned the patients to three treatment groups: 46 went onto a diet modeled on the one used in the Dietary Approaches to Stop Hypertension (DASH) study, which included a high intake of fruits, vegetables, and low-fat dairy products but was not designed to result in weight loss; 49 patients began the DASH diet with a reduced calorie level designed to produce weight loss, plus a cognitive-behavioral weight-management program, plus an exercise program that included three sessions a week of supervised exercise; and 49

control patients continued their usual care. The DASH diet used by both in-



The tripleintervention group had an average blood pressure reduction of 16/10 mm Hg.

DR. HINDERLITER

tervention groups led to significantly reduced intake of sodium and fat and a

significantly increased intake of potassium and magnesium.

After 16 weeks of treatment, the average blood pressure reduction, compared with baseline, the study's primary end point, was a 16/10–mm Hg drop in the total lifestyle modification group, an 11/8–mm Hg decline in the DASH diet–only patients, and a 3/4–mm Hg reduction in the control group.

The blood pressure reduction in the diet-only group was significantly reduced, compared with the controls, but the decline was even better in the diet, exercise, and weight loss patients, Dr.

Hinderliter reported. The average weight loss in the triple-intervention group was about 19 pounds, while people in the diet-only group did not have significant weight loss.

By the end of the study, patients in the complete lifestyle modification group had an average resting blood pressure of about 123/76 mm Hg.

The study was funded by the National Heart, Lung, and Blood Institute and Duke University and received no commercial funding. Dr. Hinderliter said he and his associates had no financial relationships to report.





>>> Stress agent and radiotracer administered within 1 minute

2 Flush immediately with 5-mL saline solution²

1 Administer Lexiscan as rapid IV injection (≈10 seconds)²

Deliver radiotracer 10-20 seconds after saline flush²

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