Intensive BP Therapy May Cut Fracture Risk

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NEW YORK – Intensive therapy to control systolic blood pressure did not appear to be associated with more falls and fractures in a study of patients under age 80 years with hypertension and type 2 diabetes, based on a report presented at the meeting.

The finding was noted in a subgroup analysis of ACCORD-BONE, an ancillary study of skeletal health in ACCORD study participants. The subgroup analysis looked at ACCORD-BONE participants in the ACCORD Blood Pressure Clinical Trial arm of ACCORD.

For the subgroup analysis, the researchers examined data from 3,282 people who were randomly assigned to standard systolic blood pressure goals of 130-139 mm Hg or to intensive systolic goals of less than 120 mm Hg.

"Intensive control of systolic blood pressure did not result in an increased risk of falls," reported Dr. Karen Margolis of the Health Partners Research Foundation in Minneapolis. "And fewer intensive than standard group patients developed nonspinal fractures."

Average blood pressure at entry was 138/75 mm Hg. Those in the intensive therapy group received a thiazide-type diuretic in combination with another class of antihypertensive drug to a goal of 120 mm Hg. The standard intervention group used the same drugs and combinations, but the systolic goal was 130-135 mm Hg and treatment was only intensified if systolic blood pressure rose above 160 mm Hg, according to Dr. Margolis.

Systolic blood pressure averaged 133 mm Hg in the standard treatment group and 119 mm Hg in the intensive treatment group. Subjects' average age was 62 years, and patients over age 80 years were excluded; 44% were women; 66% were white, 26% were black, and 2% Latino. Patients' average body mass index was 32.5 kg/m^2.

With an average follow-up of almost 5 years, ACCORD-BONE study results bucked conventional wisdom about risk of falls, according to Dr. Margolis. "About 20% in the intensive group and 21% in the standard group fell," she said. The intensive group had a 0.81 relative risk of falling, compared with the standard group. The study found no differences across age, sex, ethnicity, or status of baseline diabetes.

The overall rate of self-reported falls was 70/100 person-years, Dr. Margolis said. "This also was lower in the intensive group at 62/100 person-years vs. the standard group at 74/100.

"With regard to nonspinal fractures, the study identified 273 individuals with at least one fracture, including 63 ankle, 34 humerus, 29 foot, 25 wrist, and 19 hip," said Dr. Margolis. "Overall, fracture risk was significantly lower in the intensive vs. the standard blood pressure group with a hazard ratio of 0.78," she said.

Dr. Margolis acknowledged the ACCORD-BONE study had some limits. "One of the most striking findings from the blood pressure treatment data was that there was a very, very large difference in thiazide use – thiazides being known to improve bone density – so that's a very suggestive mechanism," she said.

Dr. Joseph L. Izzo of the University of Buffalo, N.Y., remarked about obesity in the study group, noting the high average BMI. "I'm not sure that overweight people aren't protected in some way against blood pressure–related falls," Dr. Izzo said.

Physical activity might also explain why those on intensive therapy were less prone to falls and fractures, noted Dr. Bryan Williams of the University of Leicester, England. "To some extent, falls are not always due to just people getting possible hypotension; they're related to amount of activity," he said.

Dr. Margolis said that a substudy would further investigate physical activity in this population.

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