JNC-7 Spells Big Gains in Blood Pressure Control

BY BRUCE JANCIN
Denver Bureau

CHICAGO — Hypertension control has improved markedly in the United States since spring of 2003—and the JNC-7 guidelines deserve most of the credit, James Jackson, Pharm.D., said at the annual scientific sessions of the American Heart Association.

The improvement in blood pressure control since release of JNC-7 (the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure) in the spring of 2003 has been particularly impressive among hypertensive patients with diabetes. Even so, there remains much room for further improvement on this score, as fewer than one-third of such patients in the JNC-7 era have their blood pressure controlled to goal, added Dr. Jackson of Xcenda, a Palm Harbor, Fla.–based health outcomes research and consulting company.

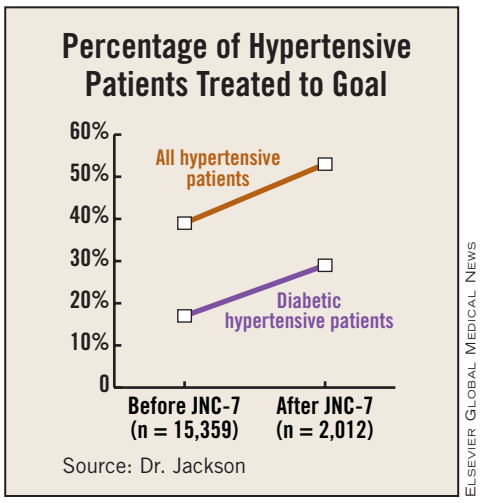
Physicians have taken to heart the JNC-7 message to prescribe more aggressively. More hypertensive patients are on two or three antihypertensive drugs than was the case just prior to JNC-7. But by far the most dramatic change in prescribing has been the nearly threefold increase in the percentage of patients on fixed-dose combination therapy, he noted.

To study JNC-7's effect on blood pressure control rates and treatment patterns, he and his coinvestigators accrued a random national sample of hypertensive subjects drawn from 23 managed care organizations and physician groups. The pre–JNC-7 group consisted of 15,359 patients followed during June 1998–March 2003; the post–JNC-7 cohort comprised 2,012 patients followed during December 2003–April 2006.

The proportion of all hypertensive patients with good blood pressure control rose from 39% in the pre–JNC-7 period to 53% after the JNC-7 release. The percentage of diabetic hypertensive patients treated to goal nearly doubled during the same time span, from 17% before JNC-7 to 29% afterward.

In the pre–JNC-7 era, 45% of hypertensive patients for whom medication was prescribed received a single agent; after JNC-7 that figure dropped to 37%. Meanwhile, the use of dual therapy climbed from 31% to 37%, and three or more antihypertensive drugs were used in 20% of patients, up from 17% before JNC-7.

The most widely utilized class of antihypertensive drugs since JNC-7 has been diuretics, prescribed for 33% of patients.



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The use of ACE inhibitors declined from 31% before JNC-7 to 24% afterward. Angiotensin-2 receptor blockers took up the slack during this period, as the proportion of patients on this class of drugs rose from 8% to 13%.

Approximately one-quarter of patients were on a β-blocker for control of hypertension, a proportion that did not change over the study period. Meanwhile, the use of calcium channel blockers declined significantly from 27% before JNC-7 to 24% afterward, Dr. Jackson continued.

The use of fixed-dose combinations has increased more than that of any other antihypertensive agents since release of JNC-7. Before JNC-7, 11% of hypertensive patients were on a fixed-dose combination; since JNC-7 this figure has jumped to 27%.

Advantages of fixed-dose combination therapy include improved patient compliance, fewer drug interactions and adverse events, less likelihood of inadequate dosing, and less out-of-pocket expense, the researcher added.

His study was supported by Novartis Pharmaceuticals Corp. ■

Antioxidants of No Benefit for Secondary Prevention in Women

BY DEBRA L. BECK
Contributing Writer

CHICAGO — Antioxidant B vitamins and folic acid failed to slow the progression of cardiovascular disease in women at high risk or with established cardiovascular disease, according to results from the WAFACS trial presented at the annual scientific sessions of the American Heart Association.

"These data, along with those from previously published randomized trials, do not support the use of folic acid and B vitamin supplements as preventive agents against cardiovascular disease among those with established vascular disease or those at high risk," reported Dr. Christine M. Albert of the division of preventive medicine at Brigham and Women's Hospital, Boston.

These data do not support the use of folic acid and B vitamin supplements as preventive agents in those with established vascular disease or at high risk.

"The combination of folic acid, vitamin B_6, and vitamin B_{12} did not reduce risk of total cardiovascular events or any of the individual secondary end points among 5,442 women at high risk for cardiovascular disease over a very long follow-up of 7.3 years," she said.

In WAFACS (Women's Antioxidant and Folic Acid Cardiovascular Study), 5,442 female health professionals participating in another randomized trial of antioxidant vitamins (WACS) were randomly assigned to a combination of folic acid (2.5 mg daily), vitamin B_6 (50 mg daily), and vitamin B_{12} (1 mg daily). These women were considered to be high risk based on either a confirmed history of cardiovascular disease or the presence of at least three cardiovascular disease risk factors, including hypertension, hypercholesterolemia, diabetes, current smoking, body mass index higher than 30 kg/m^2, or a parental history of myocardial infarction before age 60 years.

After a mean follow-up of 7.3 years, 796 women (14.6%) had a confirmed cardiovascular event. In the intention-to-treat analysis, the cumulative incidence of the primary end point did not differ between those given active folate treatment and those given folate placebo.

"This absence of benefit was observed in all prespecified subgroups including the high-risk primary prevention population," said Dr. Albert.

The researchers tested whether homocysteine lowering by background folic acid fortification in the food supply, which took effect between 1996 and 1998, might have accounted for the null findings, and found that this was not the case. Homocysteine levels were about 18% lower in the active treatment arm, compared with the placebo arm, but still there was no benefit.

Discussant Dr. Rita F. Redberg considered the question of whether the results of WAFACS can be generalized to men and to the primary prevention setting. If such studies were to be done in those populations, results would be unlikely to differ significantly from those seen in this trial, she said.

"Study after study has failed to find a benefit from dietary supplements, and I think there's just no getting away from an emphasis on a heart-healthy diet and regular physical activity," concluded Dr. Redberg, director of women's cardiovascular services at the University of California, San Francisco. ■

Lifestyle Changes in Middle Age Keep Disease at Bay

BY PATRICE WENDLING
Chicago Bureau

TUCSON, ARIZ. — The benefits of adopting healthy lifestyle habits later in life are significant, Dr. Dana King and colleagues reported at the annual meeting of the North American Primary Care Research Group.

He presented a secondary analysis of the Atherosclerosis Risk in Communities (ARIC) cohort study of 15,792 adults who were aged 45-64 years at the outset. Participants were reexamined every 3 years, with the first baseline screening occurring in 1987-89, and the fourth and final screening in 1996-1998. Telephone visits were conducted annually.

At baseline, only 1,344 (8.5%) had all four of the healthy lifestyle habits examined: They ate at least five fruits and vegetables a day, walked 150 minutes a week or more, were not obese, and did not smoke, "That [low rate was] tremendously disappointing," said Dr. King, of the department of family medicine at the Medical University of South Carolina, Charleston.

Those less likely to have all four healthy habits tended to be male, black, and aged 45-54 years, and to have hypertension or diabetes mellitus, less than a college education, and an annual family income of less than $35,000.

After 6 years, an additional 970 participants switched to a healthier lifestyle. Women were more likely to switch than men (9.1% vs. 7.4%), he said. The most common changes were improved diet, increased exercise, and smoking cessation. Almost no one changed his or her body mass index category significantly, he said.

For those who adopted all four habits, the benefits were substantial. Using an adjusted logistic regression analysis, the relative risk of cardiovascular disease was reduced by 35% and all-cause mortality by 40% in only 4 years, he said. Adopting only three habits was not as beneficial, resulting in a 25% reduction in all-cause mortality and a nonsignificant reduction in cardiovascular disease compared with those who have fewer healthy habits.

Dr. King called the results surprising and powerful because of the substantial benefit in cardiovascular disease and mortality seen after a relatively short period of 4 years. Other studies, such as the Women's Health Study and the Health Professionals Follow-up Study, have shown similar results. But these studies investigated individual habits and didn't focus on people who adopted new, healthy lifestyles in middle age, he said.

"The present study adds new information that adopting a healthy lifestyle later in life is not futile," Dr. King said. "Doing all the habits is the way to go."

Limitations of the study included self-report data for diet and exercise and a short mortality and cardiovascular follow-up period, Dr. King noted. ■