## Hypertension-Dementia Link in Some With MCI

BY MARY ANN MOON

In patients whose mild cognitive impairment affects executive function but not memory, the presence of hypertension signals an increased likelihood of progression to full dementia, according to data from almost 1,000 patients.

This subgroup comprises about onethird of all patients who have mild cognitive impairment. "Control of hypertension in this population could decrease by one-half the projected 50% 5-year rate of progression to dementia," said Dr. Shahram Oveisgharan and Dr. Vladimir Hachinski of the University of Western Ontario, London.

Although some studies have found an association between late-life hypertension and the development of dementia,

Hypertension predicted progression to dementia in 58% of patients who had MCI with executive dysfunction alone, compared with 28% who did not have hypertension.

others have not. The investigators postulated that the cognitive domain of dysfunction, or the abilities that have been affected by the impairment, may be the crucial factor that determines the association between hypertension and cognitive deterioration.

"To our knowledge, this has not been addressed in previous studies," Dr. Oveisgharan and Dr. Hachinski noted (Arch. Neurol. 2010;67:187-92).

They used data from a community-based longitudinal cohort study, the Canadian Study of Health and Aging (CSHA), to assess this association. More than 10,000 subjects aged 65 years and older underwent a battery of neuropsychological tests in the CSHA.

A total of 990 participants were diagnosed as having cognitive impairment without dementia and were followed for 5 years. Only people whose mild cognitive impairment (MCI) was not related to neurologic disorders, psychiatric illness, or substance abuse disorders were included in this study.

In the cohort as a whole, hypertension was not related to cognitive deterioration. Approximately 60% of participants with hypertension and 64% of those without hypertension progressed from mild cognitive impairment to dementia during follow-up, a difference that was not significant.

Hypertension, however, did predict progression to dementia in one subgroup of patients: those who had MCI with executive dysfunction alone. Approximately 58% of this subgroup who had hypertension progressed to dementia, compared with only 28% who did not have hypertension, the investigators said.

In contrast, the presence of hypertension did not predict progression to de-

mentia in patients who had MCI with memory dysfunction alone or in patients who had MCI with both executive and memory dysfunction.

To rule out the possibility that a history of stroke could be influencing the findings for the subgroup of patients who had MCI with executive dysfunction alone, the researchers conducted a further analysis of the subgroup, excluding all stroke patients. Hypertension remained a sig-

nificant predictor of progression to dementia, with 52% of the nonstroke hypertensive patients progressing to dementia, compared with only 19% of nonstroke nonhypertensive subjects.

This study was limited in that it was a secondary analysis of data amassed for another study, and thus "has the limitations of a post hoc analysis," they noted. Moreover, cognitive status could not be determined in about 10% of the cohort

who refused retesting, and it could only be estimated (from information on death certificates and in interviews with relatives) in another 30% who died during follow-up, Dr. Oveisgharan and Dr. Hachinski said.

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