Cognitive Impairment Is More Common in Men

BY MARY JO M. DALES
Editorial Director

CHICAGO — Men have more mild cognitive impairment than women do, yet there is no gender difference in the prevalence of dementia, according to the results of one of the first studies to measure mild cognitive impairment prospectively in a population-based setting.

The findings, reported by Dr. Rosebud O. Roberts at the annual meeting of the American Academy of Neurology, suggest that dementia progresses either faster in women or slower in men.

For the ongoing study called the Mayo Clinic Study of Aging, mild cognitive impairment (MCI) was evaluated in a population sample from Olmstead County, Minn. The 70- to 79-year-old group included 490 women and 596 men. The 80- to 89-year-old group included 512 women and 452 men. For both age groups, there were 1,002 women and 1,048 men.

A nurse, physician, or neuropsychologist evaluated each individual using face-to-face measures. Subjects were evaluated in four domains—memory, executive function, language, and visuospatial skills. MCI was defined as impairment in one or more domains or an overall mild decline across cognitive abilities that is greater than would be expected for an individual’s age or education but is insufficient to interfere with everyday functioning.

Based on these evaluations, 74% of the group had normal cognition, 16% had MCI, and 10% had dementia. Of the nearly 2,000 study participants without dementia, 51% were male; 47% had less than 12 years of education; 32% were 80-89 years old; and 61% were married.

Subjects were studied prospectively beginning in October 2004 and follow-ups were conducted through 2010. This differs from most other studies of MCI, which had the limitations of applying MCI criteria to previously collected data that were conducted in study samples, such as those attending memory clinics, who might not be representative of the general population.

In men, the prevalence of mild cognitive impairment steadily increased from about 10% at age 70 and suddenly spiked after age 85 to affect 40%. In women, the rate rose more slowly and the prevalence was far lower, peaking at about 20% at age 85.

Even after the data were corrected for age plus education, marital status, and socioeconomic status, women had less cognitive impairment but comparable rates of dementia, compared with men, Dr. Roberts said.

“We found the overall prevalence of mild cognitive impairment is quite high—over 16%,” said Dr. Roberts. “But perhaps the more surprising finding is the higher prevalence of MCI in men with the comparable prevalence of dementia for men and women.”

Several possible explanations for this disparity include a prevalence of risk factors in midlife vs. later life; the progression rate from MCI to dementia, and death among persons with MCI.

Dr. Roberts said that she and her coinvestigators are in the process of adding another 1,000 participants to continue the follow-up study. The study was supported by the National Institutes of Health and the Robert H. and Clarice Smith and Armand Van Buren Alzheimer’s Disease Research Program.

More NIH, NSF Funding for Alzheimer’s Research Urged

BY MICHELE G. SULLIVAN
Mid-Atlantic Bureau

WASHINGTON — A firm federal commitment to increased biomedical-research funding is the best defense against the wave of Alzheimer’s disease predicted to hit the United States, according to the Retired U.S. Supreme Court Justice Sandra Day O’Connor and former Speaker of the House Gingrich testified at the Senate hearing.

By 2050, federal government spending on care for Alzheimer’s patients could dwarf the current annual bill of $150 billion. “Federal spending on Alzheimer’s (care) will increase to more than $1 trillion per year by 2050, in today’s dollars—that is more than one-tenth of America’s current economy.”

Retired U.S. Supreme Court Justice Sandra Day O’Connor, who at age 74 suffers from advanced Alzheimer’s disease, also urged the committee to support research. While a cure would be the “Holy Grail,” she said, even a drug that could delay the onset of Alzheimer’s disease would reap huge savings.

The government could also step up the pace of research with legislation encouraging private investment, Mr. Gingrich said. “I would strongly urge you to amend the Orphan Drug Act to include all brain research as orphan drug activity.”

The downside of following the orphan drug path would be longer-than-normal approval times for any drugs developed, Mr. Gingrich said. But the benefits would be worth the increase in costs resulting from drugs being slow to go generic, he asserted.

In men, progression from MCI to dementia was more than three times as likely if they had the APOE4 allele, and more than twice as likely if they had the APOE4 allele, a low level of education, or subclinical depression. And the odds of progressing to dementia were almost twice as high in women who took anticholinergic inhibitors (odds ratio 1.8).

Predictors of progression from MCI to dementia in both men and women in a less rigorous, univariate analysis included the APOE4 genotype, hypertension, diabetes, age, a low level of education, low intelligence, subclinical depression, stroke, social isolation, and difficulty with at least IADL.

“MCI cases in the general population can be differentiated by a much larger number of sociodemographic and clinical factors than previously observed,” the investigators wrote. “These findings support the notion that MCI is a common end point to multiple etiologies. Epidemiologists who study MCI cases in the general population may not be the same for men and women.”

The study was limited by a lack of analysis of MCI subtypes and by a short follow-up, which may account for the relatively low dementia rate, the investigators said. However, clinicians may be able to use the diverse risk factor data to develop gender-specific clinical interventions, they noted.

The investigators said they had no financial conflicts to disclose.

In a multivariate analysis, older age significantly predicted progression to dementia in men and women.

Predictors of progression from MCI to dementia in both men and women in a less rigorous, univariate analysis included the APOE4 genotype, hypertension, diabetes, age, a low level of education, low intelligence, subclinical depression, stroke, social isolation, and difficulty with at least IADL.

“MCI cases in the general population can be differentiated by a much larger number of sociodemographic and clinical factors than previously observed,” the investigators wrote. “These findings support the notion that MCI is a common end point to multiple etiologies. Epidemiologists who study MCI cases in the general population may not be the same for men and women.”

The study was limited by a lack of analysis of MCI subtypes and by a short follow-up, which may account for the relatively low dementia rate, the investigators said. However, clinicians may be able to use the diverse risk factor data to develop gender-specific clinical interventions, they noted.

The investigators said they had no financial conflicts to disclose.

In a multivariate analysis, older age significantly predicted progression to dementia in men and women.

Predictors of progression from MCI to dementia in both men and women in a less rigorous, univariate analysis included the APOE4 genotype, hypertension, diabetes, age, a low level of education, low intelligence, subclinical depression, stroke, social isolation, and difficulty with at least IADL.

“MCI cases in the general population can be differentiated by a much larger number of sociodemographic and clinical factors than previously observed,” the investigators wrote. “These findings support the notion that MCI is a common end point to multiple etiologies. Epidemiologists who study MCI cases in the general population may not be the same for men and women.”

The study was limited by a lack of analysis of MCI subtypes and by a short follow-up, which may account for the relatively low dementia rate, the investigators said. However, clinicians may be able to use the diverse risk factor data to develop gender-specific clinical interventions, they noted.

The investigators said they had no financial conflicts to disclose.

In a multivariate analysis, older age significantly predicted progression to dementia in men and women.

Predictors of progression from MCI to dementia in both men and women in a less rigorous, univariate analysis included the APOE4 genotype, hypertension, diabetes, age, a low level of education, low intelligence, subclinical depression, stroke, social isolation, and difficulty with at least IADL.

“MCI cases in the general population can be differentiated by a much larger number of sociodemographic and clinical factors than previously observed,” the investigators wrote. “These findings support the notion that MCI is a common end point to multiple etiologies. Epidemiologists who study MCI cases in the general population may not be the same for men and women.”

The study was limited by a lack of analysis of MCI subtypes and by a short follow-up, which may account for the relatively low dementia rate, the investigators said. However, clinicians may be able to use the diverse risk factor data to develop gender-specific clinical interventions, they noted.

The investigators said they had no financial conflicts to disclose.