

Memory Care Monthly

Supporting Healthcare Professionals in Caring for the Aging

October 2007

The Mild Cognitive Impairment Stage of Alzheimer's Disease

Multiple studies have clearly demonstrated disease-delaying effects of Alzheimer's disease (AD) treatments in dementia stages. However, any disease delaying effects in the mild cognitive impairment (MCI) stage have not yet been established and await validation. Delay in disease progression in the dementia stages are probably due to the lowering of brain beta amyloid 1-42 levels. Since the underlying physiopathology of AD from its MCI to dementia stage does not change, there is no a priori reason to think that lowering beta amyloid 1-42 brain levels during the MCI stage of AD will not also delay its progression. MCI trials conducted, to date, were designed to evaluate all causes, not just AD. As such, they were not designed to measure a treatment effect in MCI AD. Furthermore, these MCI trials had serious methodological flaws that would have made it difficult to detect a beneficial treatment effect among MCI AD patients[1]. In spite of these flaws, post-hoc analyses of possible MCI AD patients suggested that rivastigmine reduces the rate of decline of progression of MCI by 24%, albeit at the cost of unwanted side effects[2]. The availability of the Exelon patch will largely resolve the side effect issue while permitting the ability to delay AD progression during both MCI and dementia stages. Also, given the findings with Flurizan, the availability of Beta-amyloid lowering agent class medications as early as 2008 or 2009 will be most beneficial when started early during the course of AD.

References

1. Farlow MR, Lilly ML, ENA713 B352 Study Group. Rivastigmine: An open-label, observational study of safety and effectiveness in treating patients with alzheimer's disease for up to 5 years. *BMC Geriatr.* 2005;5:3.
2. Farlow MR. Do cholinesterase inhibitors slow progression of alzheimer's disease? *Int J Clin Pract Suppl.* 2002;(127):37-44.

November is Alzheimer's Awareness Month

To support your efforts to detect and manage memory disorders we have included an educational flyer on the following page for you to share with your patients.

We also offer FREE patient education brochures called "About Memory Loss" for you to share with your patients. To request copies, please write customerservice@mccare.com

November is Alzheimer's Awareness Month

Did you know:

Alzheimer's Disease Can be Treated



Early Intervention Can Slow
Progression for Years



Such Delay Improves Quality of Life

Ask you doctor about early detection and diagnosis of Alzheimer's Disease

Caregiving for Alzheimer's Patients May Curtail Caregiver's Life

Researchers have studied the effect of providing care for patients with Alzheimer's disease on the health of caregivers. The study included 41 individuals caring for an Alzheimer's patient for an average of 5 years, and 41 individuals who were not caring for ill persons. Research found that caregivers had twice the number of symptoms for depression in comparison to non-caregivers. Caregivers also had lower levels of T-cells and higher level of proteins, which caused inflammation. Caregivers also had shortened telomeres, the genetic material at the end of chromosomes that promotes error-free cell division. Telomeres shorten gradually over time, and such shortening in Alzheimer's caregivers equaled to four to eight years of aging. Changes in genetic material were seen in immune cells known as peripheral blood mononuclear cells (PBMCs).

Reference: Amanda K. et al. *Journal of Immunology*. 2007; 179: 4249-54.

Mediterranean Diet May Reduce Mortality Risk in Alzheimer's Patients

Mediterranean diet includes high intake of vegetables, legumes, fruits, and cereals, high intake of unsaturated fatty acids (such as olive oil), low intake of saturated fatty acids, moderately high intake of fish, a low to moderate intake of dairy products, low intake of meat or poultry, and regular but moderate amount of alcohol, usually wine taken with meals. A recent study followed 192 subjects who had been diagnosed with Alzheimer's disease and evaluated each person's adherence to Mediterranean diet, scored on a scale of 0-9, 9 indicating the highest level of adherence to the diet. After 4.4 years of follow-up, 44% of patients had passed away. Analysis of the data revealed that adherence to the Mediterranean diet was the main predictor of mortality. Mortality risk fell with each additional point indicating a higher level of adherence to the Mediterranean diet. Among all the subjects, those in the highest tertile of adherence had the lowest risk and 3.91 year longer survival rate when compared to those in the lowest tertile.

Reference: Scarmeas N. et al. *Neurology*. 2007; 69(11): 1084-93.

Higher Education Lowers Dementia Risk

1,388 individuals middle-aged or older were followed for an average of 21 years as part of the Results of Cardiovascular Risk Factors, Aging, and Dementia (CAIDE) study. Throughout the study, researchers gathered information such as socioeconomic factors, health behavior, health status, and medical history of the subjects. The subjects also had their blood pressure measured and underwent ApoE genotyping and had their cognition assessed. The subjects were categorized into three groups based on education: low for those with 5 years or less of education, medium for those with 6 to 8 years of education and high for those with 9 or more years of education. During the course of the study, 61 individuals were diagnosed with dementia and 48 with Alzheimer's disease. Those with a high level of education had an 80% lower level of risk for developing dementia when compared to those with a low level of education. Those with medium level of education had a 40% lower level of risk when compared to those with low level of education.

Adjusting for any other factor did not change the level of risk, thus education level independently lowered the risk for dementia. Tiia Ngandu, MD, PhD of the Karolinska Institute in Stockholm, Sweden, led the study.

Reference: Ngandu T. et al. *Neurology*. 2007; 69(14): 1442-50.

Higher Plasma Folate Concentrations Associated With Better Cognitive Performance

Researchers in the Netherlands studied the link between higher plasma folate concentrations and cognitive performance. They analyzed data from the Rotterdam Scan Study on 1033 non-demented subjects aged between 60 and 90 years old. The subjects had plasma folate levels ranging from 0.9 nmol/L to 55 nmol/L. The authors report that after adjusting for potential confounders, the mean change in test score per 1-SD increase in plasma folate was 0.05 for global cognitive function, 0.08 for psychomotor speed, and for memory function. Adjustment for homocysteine concentration only slightly diminished these associations. The odds ratio relating a 1-SD increase in plasma folate to the presence compared with the absence of severe white matter lesions was 0.79, whereas no relation was seen between folate status and hippocampal or amygdalar volume.

Reference: de Lau LML. Et al. Am J Clin Nutr. 2007; 86(3): 728-34.

Study Highlights Differences between Parkinson's Disease Dementia and Alzheimer's Disease Dementia

Dementia associated with Parkinson's disease is distinctively different from that seen in Alzheimer's disease according to a recent study led by Dr. Kolbjorn Bronnick at Stavanger University Hospital, Norway. Researchers studied 488 patients with Parkinson's dementia and 488 patients with Alzheimer's disease, using the MMSE and ADAS-cog. Although both groups showed memory impairment, patients with Alzheimer's disease often performed worse than patients with Parkinson's dementia. Both groups exhibited significant impairment in verbal memory when compared to a normal control group. Alzheimer's patients performed poorly on orientation tests while Parkinson's patients performed poorly on attentional tasks. Using the patient's profile, diagnosis was predicted with a 74.7% overall accuracy.

Reference: Bronnick K. et al. J Neurol Neurosurg Psychiatry. 2007; 78(10): 1064-8.

Functional MRI May Detect Early Stage Alzheimer's Disease

Functional Magnetic Resonance Imaging (fMRI) was used to study the brains of individuals as they completed a memory task. The subjects included 13 people with mild Alzheimer's disease, 34 patients with mild cognitive impairment and 28 healthy individuals. Those with Alzheimer's disease and mild cognitive impairment had reduced brain activity in the medial temporal lobe. Additionally researchers found reduced activity in the posteromedial cortex associated with personal memory. Dr. Jeffery R. Petrella, an associate professor of radiology at Duke University, led the study.

Reference: Petrella J. et al. Radiology. 2007; 245(1): 224-35.



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