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CLINICAL

Markers May Signal Early Alzheimer's

Biomarkers in cerebrospinal fluid may indicate whether patients with mild cognitive impairment will progress to Alzheimer's disease and could assist in the development of new screening tools or treatments, according to Dr. Oskar Hansson of Lund University, Malmö, Sweden, and his associates.

The investigators followed 137 patients with mild cognitive impairment (MCI) who had consulted the memory disorder clinic at the university hospital during 1998-2001. A control population of 39 healthy

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volunteers with no memory complaints was recruited from Malmö. Subjects were followed for 4-6 years after a sample of cerebrospinal fluid was obtained from a lumbar puncture.

Of the 137 patients with MCI at baseline, 57 developed Alzheimer's disease (AD) during the study period, and 21 developed other forms of dementia. Those patients with abnormal concentrations of the biomarkers β-amyloid, total tau, and phosphorylated tau at baseline were more likely to have progressed to AD (Lancet Neurol. 2006;5;228-34).

Concentrations of total tau greater than 350 ng /L and β -amyloid of less than 530 ng /L at baseline were defined as pathologic. Patients with pathologic levels of the biomarkers were more than 20 times more likely to progress to AD than patients with MCI without pathologic levels of the biomarkers, the authors reported. These biomarkers have been analyzed in previous research, but the studies followed patients for only 1-2 years.

Early Motor Symptoms May Predict PD

Motor symptoms, including stiffness, tremors, and imbalance, are associated with a significantly increased risk for development of Parkinson's disease (PD).

"Subjective complaints related to motor function might indicate a very early phase of not-yet-diagnosable Parkinson's disease during which dopamine loss is not sufficient to produce overt typical PD symptoms" wrote Dr. Lonneke M.L. de Lau and colleagues (Arch. Neurol. 2006;63: doi:10.1001/archneur.63.3.noc50312).

Dr. de Lau of Erasmus Medical Center, Rotterdam, the Netherlands, prospectively followed 6,038 elderly patients (mean age 69 years) who were free of dementia and parkinsonian signs at baseline. At baseline, 52% of subjects reported at least one of the five typical features of the disease: stiffness (32%), tremor (11%), slow movement (21%), feeling of imbalance (11%), and falling (15%).

After a mean of 6 years' follow-up, 56 subjects had developed PD. Of those, 72% had reported at least one motor symptom during the initial assessment, and 41% had reported at least two symptoms. Stiffness and tremor at baseline were each associated with more than a twofold increase in the risk of the disease, while a feeling of imbalance was associated with more than a threefold increased risk.

Self-reported falling and slow movement were not significantly associated with increased risk.

If a preclinical screening tool could be developed, the investigators said, it might be able to identify a window of opportunity during which neuroprotective medication could someday slow or arrest the progress of the disease, the authors noted.

Driving Safely After Cataract Surgery

Nearly all patients who were driving 5 years after cataract surgery had sufficient visual acuity to do so safely, according to researchers who assessed vision in 189 Swedish persons.

Most had undergone standard, sutureless clear corneal phacoemulsification with a temporal incision and insertion of a foldable intraocular lens; 117 men (mean age 71 years) and 72 women (mean age 69 years) were still actively driving 5 years after the procedure, reported Dr. Eva Mönestam and Dr. Britta Lundqvist of Umeå (Sweden) University.

Almost all the subjects (95%) stated they had no difficulties driving in daylight, and all said they had no problems estimating distances while driving. The percentage who reported visual difficulties while driving in darkness was large (43%) but comparable to that reported in the literature for elderly people with healthy eyes (J. Cataract Refract. Surg. 2006;32:50-5).

Only five patients (3%)—four men and one woman—were found to have a best corrected visual acuity below the legal requirement for driving in Sweden. Most of the subjects with the poorest vision had visual impairment due to macular degeneration. Only one subject had "aftercataract," in which part of the lens not removed during surgery becomes cloudy.

Women were 1.8 times more likely than men to report having visual difficulties while driving after cataract surgery. It may be that the surgery is less successful in women, or it may be that women either are more conscious of their symptoms or more willing to report their symptoms than are men, the researchers said.

-From staff reports

