Atypical form of Alzheimer's disease may be present in a more widespread number of patients

Jacksonville, Fla., USA (May 1, 2014) — Neuroscientists at Mayo Clinic in Florida have defined a subtype of Alzheimer’s disease (AD) that they say is neither well recognized nor treated appropriately. The variant, called hippocampal sparing AD, made up 11 percent of the 1,821 AD-confirmed brains examined by Mayo Clinic researchers — suggesting this subtype is relatively widespread in the general population. The Alzheimer’s Association estimates that 5.2 million Americans are living with AD. And with nearly half of hippocampal sparing AD patients being misdiagnosed, this could mean that well over 600,000 Americans make up this AD variant, researchers say.

In an oral presentation at the annual meeting of the American Academy of Neurology in Philadelphia, scientists say these patients are substantially different from the most commonly known form of AD, which affects the hippocampus, the center of memory. The patients, mostly male, are afflicted at a much younger age, and their symptoms can be bizarre — behavioral problems ... controlled by an “alien” unidentifiable force, or visual disturbances in the absence of eye problems, researchers say. They also decline at a much faster rate than do patients with the most common form of AD.

“Many of these patients, however, have memories that are near normal, so clinicians often misdiagnose them with a variety of conditions that do not match the cognitive abnormalities,” says the study’s lead author, Melissa Murray, Ph.D., an assistant professor of neurosurgery at Mayo Clinic in Florida.

Many of these patients are diagnosed with frontotemporal dementia, a disorder characterized by changes in personality and motor behavior, or ataxic (ataxia-telangiectasia), characterized by ataxia, stroke-like episodes, and associated abnormalities in language comprehension and speech, or Huntington’s disease. Although patients of all ages can develop Huntington’s, there is a higher incidence in the young than in the common form of the disease,” Dr. Murray says.

The researchers benefit greatly from one of the largest brain banks in the country — more than 6,500 brain donations — as well as a collaborative environment between neuroscience research and neurology at Mayo Clinic, she says.
In these patients, the prevalence of dementia and memory loss varies among different areas of the brain, according to Dr. Murray. This research supports the idea that some patients with dementia do not have the exact same brain changes, even if they have the same type of disease.

Dr. Murray says this research, along with previous studies, supports the idea that there is a subcategory of AD called hippocampal sparing AD. This subgroup of patients may have different symptoms compared to other patients with AD, and understanding these differences could help in developing targeted therapies.

Dr. Murray emphasizes the importance of recognizing that not all patients with dementia have the same symptoms. By understanding these variations, clinicians can provide more personalized care and treatment options for patients with AD.

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