

## PET-CT exams help identify cognitive reserve in early-onset Alzheimer's disease

May 2 2011

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A recent study revealed that the "cognitive reserve" in early-onset Alzheimer's disease (AD) and PET-CT examinations can be used to effectively to identify early-onset AD patients.

"Although early-onset Alzheimer's dementia is quite rare, it can be devastating to the patients that carry the diagnosis," said Dr. Jacob Richard Hodge, lead researcher for this study at the Mayo Clinic in Rochester, Minn. "Symptoms are often unexpected and support networks are generally directed towards an older population."

In patients presenting with similar clinical severities of the disease, researchers for this study discovered a "cognitive reserve," which slowed the outward expression of symptoms. "Our research demonstrates that those patients with increasing education are better able to cope with the [disease pathology](#) before they express the symptoms of Alzheimer's dementia," Dr. Hodge said. This study evaluated PET-CT examinations in 91 patients under age 65 to see if this cognitive reserve could be identified with early-onset AD, which often has a more aggressive course and progression.

Additionally, researchers replicated previously published data using PET-CT examinations, and they were able to detect significant abnormalities in patients with early-onset AD, thereby supporting its usefulness with younger patients. "Alzheimer's [dementia](#) is often not suspected in younger patients," Dr. Hodge said. "Therefore, PET-CT brain imaging can be helpful in the diagnosis."

While the discovery of the "cognitive reserve" will not slow the progression of the disease, Hodge is confident that patients can improve the quality of their lives with the proper diagnosis and education. "Once the diagnosis is determined, a patient can begin to manage the disease and plan for the future," Dr. Hodge stated.

Dr. Hodge will deliver a presentation on this study on Monday, May 2, 2011 at the 2011 ARRS Annual Meeting at the Hyatt Regency Chicago.

Provided by American Roentgen Ray Society

Citation: PET-CT exams help identify cognitive reserve in early-onset Alzheimer's disease (2011, May 2) retrieved 3 May 2024 from <https://medicalxpress.com/news/2011-05-pet-ct-exams-cognitive-reserve-early-onset.html>

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