BIOMARKERS

POSTER PRESENTATION

Impact of amyloid PET in the clinical care of US Veterans in a Tertiary Memory Disorders Clinic

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Abstract

Background: Prior studies assessing the clinical impact of amyloid PET have been limited to assessments before and after the scan. We aim to characterize the impact of amyloid PET in a veterans population with cognitive decline by comparing differences in clinical management within two years of follow-up.

Methods: The current retrospective observational study includes all patients seen for an initial evaluation for cognitive complaints in the Memory Disorders Clinic at the VA Boston Healthcare System from October 2016 to January 2020. Clinical impact outcomes within two years of follow-up were compared between patients with and without an aPET scan. Poisson regressions, negative binomial regressions, and binomial logistic regression were used for the analysis. Age, cognitive syndrome, follow-up time, clinical diagnosis after initial evaluation and MoCA scores were used as covariates. Additionally, propensity score matching was performed to balance confounders between the two groups. To further understand the clinical impact outcomes in the aPET group, multiple regressions were performed within the group.

Results: Five-hundred-sixty-five veterans were included in the analysis. Thirty-five percent of patients underwent aPET imaging in addition to routine diagnostic workup. The study was positive in 72 patients (36.56%). Having an aPET, in addition to the usual diagnostic workup, was associated with a longer follow-up time, and a higher diagnostic variability at follow-up. We did not find an association between aPET use and the number of additional diagnostic studies ordered, early cholinesterase inhibitors prescription, or referrals to social work, research and clinical trials. When analyzing the same clinical utility outcomes within the group with an aPET, we found that a positive result was associated with fewer additional diagnostic tests, less diagnostic variability at follow up visits, more cholinesterase inhibitors prescription, and more research referrals.

Conclusions: In medically complex populations, aPET positivity might be lower than prior studies have described, used more to “rule out” than confirm the diagnosis of Alzheimer’s disease. This lower positivity rate results in less robust differences in classically explored clinical impact variables when comparing patients with and without an aPET.