Top TEN recent interesting articles on Dementia
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1. PET/MR in Dementia and Other Neurodegenerative Diseases; Barthel H, Schroeter ML, Hoffmann KT, Sabri O; Semin Nucl Med. 2015 May;45(3):224-233

A review article on PET/MR imaging of neurodegenerative disorders with PET tracers


3618 post-mortem biopsies and 35 ante mortem 11C-Pittsburgh compound B studies were reviewed. Braak tangle stage, but not Thal amyloid phase predicted age at onset, disease duration, and final Mini-Mental State Examination score. However Thal amyloid phase, but not Braak tangle stage or cerebral amyloid angiopathy predicted 11C-Pittsburgh compound B standard uptake value ratio.


Ten healthy controls, 10 AD patients, and 8 FTD patients underwent dynamic 18F-florbetapir PET and the FTD patients also underwent 18F-FDG PET scans. Cortical 18F-florbetapir uptake is low in most FTD patients relative to AD but visual rating of FTD scans was challenging.


73 patients with mild cognitive impairment were assessed with biomarkers and monitored for progression. 29 patients progressed with the combination of amyloid beta plus FDG-PET achieving the highest positive likelihood ratio of progression. The individual biomarker with the best performance was FDG-PET.


A meta-analysis of 14 studies. More than 50% of studies were of poor methodological quality. The article conclude that the current evidence does not support the routine use of ¹⁸F-FDG PET scans in clinical practice in people with MCI.

A review article on the role of brain FDG PET in the diagnosis of dementia.


Study of 119 patients explores the potential of PET with 18F-FDG and the amyloid- β (Aβ) tracer 11C-Pittsburgh Compound B (PiB) for the detection of individual risk in cognitively normal adults whose parents have AD. Automated analysis of FDG and PiB-PET demonstrated higher rates of abnormalities in at-risk subjects with a family history of AD, indicating potentially ongoing early AD-pathology in this population.


Subjects with Alzheimer disease (38), dementia with Lewy bodies (30) and controls (30) underwent (18)F-FDG PET and blood flow (hexamethylpropyleneamine oxime) blood flow SPECT. FDG PET was recommended by the study as it was superior to blood flow SPECT.


25 patients with dementia with Lewy bodies had FDG PET PET and TRODAT-1 (nigrostriatal dopamine pathway) scans. Dopamine transporter levels may serve as early diagnostic tool and FDG PET as staging indicator for DLB pathology.


This study of 25 patients and 3 observers demonstrates a moderate inter- and substantial intra-observer reproducibility in reporting brain 18-FDG PET-CT.