Meetings International
SciTechnol

Fangyu Peng, Int J Ment Health Psychiatry 2019, Volume: 5
DOI: 10.4172/2471-4372-C1-029

Quantitative analysis of cerebral metabolic changes in Alzheimer's disease with positron emission tomography

Fangyu Peng
University of Texas Southwestern Medical Center, USA

Aging is one of the major risk factors for development of Alzheimer's disease (AD). Brain aging is associated with various metabolic changes that play a role in the pathophysiology of AD. Using 2-deoxy-2-[18F]-fluoro-Dglucose (18F-FDG), a radiolabeled glucose analogue, changes of brain glucose metabolism can be evaluated with positron emission tomography (PET) imaging. In addition to visual assessment of altered biodistribution of 18F-FDG on PET images, semi-quantitative analysis of 18F-FDG radioactivity localized within a brain region of interest (ROI) increase sensitivity and specificity of 18F-FDG for diagnostic imaging of AD [Figure 1]. PET quantitative analysis is a useful technology for elucidation of the role of various metabolic changes in development and pathophysiology of AD.

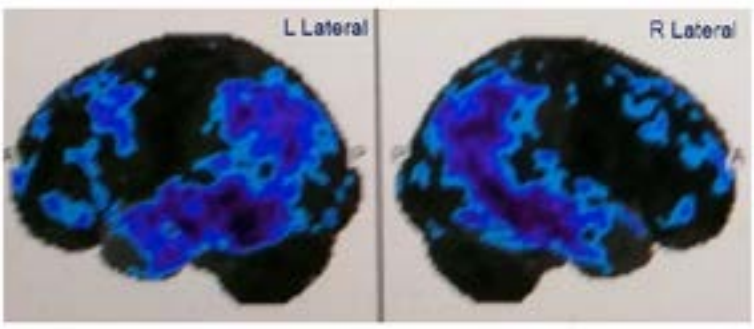

Fig 1: Cortical glucose hypometabolism in bilateral parietal and temporal lobes in an AD patient revealed by semi-quantitative analysis with 18F-FDG PET scan.

Biography

Fangyu Peng has graduated from Jiangxi Medical College in 1982 and obtained PhD in Medical Microbiology and Immunology from University of South Florida, Tampa, USA. He is the Director of PET Translation Imaging, UT Southwestern Medical Center, a premier academic medical center at USA. He has published more than 50 papers in reputed journals and has been serving as an editorial board member of Journal of Alzheimer's Disease.

Fangyu.Peng@utsouthwestern.edu

Notes: