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POTENTIAL EFFECT OF AMYLOID IMAGING ON DIAGNOSIS AND INTENDED MANAGEMENT OF PATIENTS WITH COGNITIVE DECLINE: IMPACT OF APPROPRIATE USE CRITERION

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BACKGROUND-AIM

Appropriate use criteria (AUC; Johnson et al, 2013), provide guidelines for selecting patients for whom amyloid PET could be useful. This study evaluated the impact of amyloid PET on diagnosis and intended management in patients likely to meet AUC

METHODS

We examined 229 cases from a completed study of florbetapir amyloid PET (FBP-PET) in patients either undergoing or recently completed a cognitive decline evaluation. In these cases, Alzheimer's Disease (AD) was suspected and there was uncertainty (<85% confidence) in the clinical diagnosis. All cases received a provisional diagnosis, and an intended treatment/management plan prior to FBP-PET. Three month follow-up period information for 172 cases were also available to determine actual diagnosis and management post-FBP-PET. Based on the retrospective review of prescan diagnosis/demographics, cases were classified as likely meeting AUC (AUC-like) or not

RESULTS

125/229 (55%) subjects were AUC-like. NonAUC cases included typical AD, Mild Cognitive Impairment (MCI) due to AD, Cognitive Decline without objective evidence of impairment (CD) and dementia or cognitive impairment with specific nonAD diagnosis (e.g., Fronto-Temporal Dementia). 59/125 (47%) AUC-like cases were amyloid positive (A□+). Among nonAUC cases, 29% (CD), 49% (MCI due to AD), 53% (non-AD) and 73% (typical AD) were A□+. Of 172 cases with follow-up information, diagnosis/management changed after FBP-PET in 58%/88% and 45%/77% of AUC-like and nonAUC, respectively

CONCLUSION

FBP-PET altered diagnosis and management in patients selected according to AUC. Additionally, AUC exclude patients with a relatively high (typical AD) or low (CD) probability of A□+ scan in most cases. However, in two groups of patients classified as nonAUC by the strictest interpretation of the criteria the proportion of A□+ scans was close to chance. Importantly the actual changes in diagnosis and management after fFBP-PET as recorded in clinical records were similar to the previous reported intended changes in all cases