#3041 TITLE: High prevalence of lifetime depressive symptoms in patients referred for clinical amyloid-PET: a retrospective study

AUTHORS: Anna Fitzgerald[1*], Flavia Loreto[1*], Mara Golemme[2], Zarni Win[2], Neva Patel[2], Christopher Carswell[2], Richard Perry[1 2], Paresh Malhotra[1 2]
[1]Imperial College London (UK)
[2]Imperial College Healthcare NHS Trust (UK)

OBJECTIVES/AIMS:

Depression has been reported as a possible risk factor for Alzheimer's Disease, but also as one of the clinical features of Alzheimer's as well as other dementias. Further, depression has long been associated with cognitive impairment in the absence of neurodegeneration (Connors et al. 2018). Here we sought to ascertain the prevalence of clinical depression in patients meeting widely accepted Appropriate Use Criteriafor Amyloid PET Imaging (API). We examined the prevalence of lifetime depression in patients undergoing clinical API in a real-world clinical setting and compared our findings with population data from community-dwelling older adults. We also examined whether rates of depression were higher in amyloid positive or negative groups.

METHODS:

One-hundred-and-eighty-five older adults (mean age 67.07±9.37, 49% females) underwent diagnostic workup, including API, at the Imperial Memory Clinic between January 2017 and June 2019. API was performed in line with appropriate use criteriaafter multidisciplinary team discussion.History of depressive symptoms and features of depression wereevaluated through a review of hospitalrecords and clinical correspondence. Patients were defined as having a history of depression if there was evidence of previous or current depressive symptoms and/or of a formal diagnosis of depression intheir clinical records.

RESULTS:

Based on visual reads,83 individuals had positive Amyloid-PET scans and 102 were negative.Overall, 102 (55%) patients(mean age=66.75±8.99, 56% females) had a history of lifetime depressive symptoms, compared with just 12 and 19% of elderly individuals in the general population (McDougall et al. 2007; Biddulph et al. 2014). Of the 92 patients for whom further information regarding depression onset were available, 54 (58.7%) had early symptom onset (age<60), and 38 (41.3%) had late symptom onset (age≥60). At the time of the clinical assessment at the Imperial Memory Clinic, 71 of those 102 (69.6%)were on active treatment for depression. Finally, depression was not associated with amyloid status ($\chi^2_{(1)}$ =1.12p=.26), with 42 (41.2%) amyloid-positive and 60 (58.8%) amyloid-negative patients reporting a history of depression.

CONCLUSIONS:

Over half of patients with suspected cognitive impairmentand meeting appropriate use criteria for clinical APIhad a history of depression, regardless of amyloid status. Depression is an important but incompletely understood factor in referral for evaluation with Amyloid-PET.