included. All the subjects underwent standardized clinical evaluation and neuropsychological tests including the Subjective Memory Complaints Questionnaire(SMCQ), Seoul Informant Report Questionnaire for Dementia(SIRQD), Clinical Dementia Rating(CDR), CERAD neuropsychological battery, stroop test as well as Apolipoprotein E(APOE) allele typing, MRI, and Pittsburgh compound B PET(Pib PET). PiB PET Images were classified as amyloid deposition positive if the mean ^{11}C-PiB retention value was over 1.4 in one of the following regions: the frontal, lateral temporal, lateral parietal, precuneus/posterior cingulate cortices. In MRI, we measured mean gray matter(GM) thickness using freesurfer. **Results:** Among 30 subjects, 18 subjects classified as amyloid deposition positive group(MCI+). Compared to amyloid deposition negative(MCI-) group, MCI+ group showed significantly higher APOE e4 allele frequency, lower word list recall, higher stroop color-word test scores and lower mean cortical thickness in MRI. When amyloid deposition positivity prediction models based on logistic regression analyses were compared, the combined model of CERAD word list recall, stroop color word test, and MRI mean cortical thickness was the best discrimination model after adjusting age, education, and APOE e4 allele frequency(the prediction accuracy 90 %). **Conclusions:** Our results suggest that the combination of verbal delayed recall, stroop color-word test, and cortical thickness on MRI may be useful for the discrimination of amyloid deposition status.

IC-P-015 AMYLOID-POSITIVE VERSUS NEGATIVE AMCI: SIMILARITIES AND DIFFERENCES IN NEUROPSYCHOLOGY AND NEUROIMAGING PROFILES

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Background: Patients with amnestic mild cognitive impairment (aMCI) are heterogeneous as regard to their amyloid status. As amyloid is thought to accumulate decades before first symptoms, patients who already have cognitive deficits but have no amyloid deposition raise questions regarding the origin of symptoms and offer a great opportunity to investigate the long term effect of amyloid deposition on brain and cognition. There has been no study to date assessing both cognition and brain structure and function to provide a comprehensive picture on what is similar and different between amyloid positive (Aβ+) versus amyloid negative (Aβ-) aMCI. **Methods:** Forty five aMCI patients all recruited and scanned in the same centre were dichotomized into Aβ+ and Aβ- subgroups based on cerebral Florbetapir SUVR (and a threshold based on healthy population). All patients underwent a 3T T1 structural MRI, FDG-PET scans and neuropsychological assessment. Data were compared between aMCI subgroups and to 24 matched healthy elderly Aβ- (HE). Neuroimaging data analyzes included volume and metabolism comparisons within specific AD-sensitive regions-of-interest and voxelwise analyses with SPM. **Results:** Aβ+ and Aβ- aMCI were significantly impaired in most neuropsychological tests compared to HE. Aβ+ aMCI had lower performances in episodic memory than Aβ- aMCI, while Aβ- aMCI had worse scores than Aβ+ aMCI in executive and language functions. Aβ+ and Aβ- aMCI both showed significant (FWE $p < 0.05$ cluster-level corrected) hippocampal atrophy and parieto-temporal hypometabolism compared to HE, but there was no significant difference voxelwise between aMCI subgroups. Only a trend for lower hippocampal volume in the Aβ+ aMCI compared to the Aβ- aMCI ($p=0.05$ and 0.08 for the right and left hippocampus respectively) was found when using a ROI approach. **Conclusions:** These results might be interpreted in two ways. First, they suggest that the detailed neuropsychological profile is more helpful in predicting the amyloid status than the atrophy/hypometabolism pattern at the MCI stage. Second, the fact that both aMCI subgroups exhibit the same patterns of atrophy and hypometabolism suggests either that these patterns are not related with amyloid deposition or that different pathological processes conduct to the same brain alterations in aMCI.

IC-P-016 IS THE INCREMENTAL DIAGNOSTIC VALUE OF AMYLOID-PET AFFECTED BY INFORMATION ON OTHER CORE BIOMARKERS?

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Background: A rationale use of biomarkers for Alzheimer Disease (AD) diagnosis requires the definition of an optimal algorithm to maximize information while minimizing examination costs. In this study, we investigate the selection of bio-marker examinations by dementia experts of 18 Italian memory clinics in their ordinary clinical diagnostic work-up assessing AD or Frontal-temporal disease (FTD), with the aim of assessing whether a more complete work-up would attenuate the incremental diagnostic value of amyloid-PET. **Methods:** From a naturalistic study evaluating the incremental diagnostic value of 18F-Florbetapir PET after routine clinical assessment, we considered the 210 subjects having a clinical diagnosis of AD or FTD. Clinical work-ups were categorized as "complete" if all structural (MRI or TC), functional and CSF were collected; "intermediate" if 2 exams were collected (structural and FDG-PET or structural and CSF), and "incomplete" when only structural imaging was available. We analyzed whether these 3 different work-ups affect the incremental value of amyloid-PET, performed on top of the traditional work-up, in terms of diagnostic changes, changes in diagnostic confidence and in treatment. Our hypothesis was that a more complete work-up would be associated with a lower incremental value of amyloid-PET. **Results:** Only 16 (7.6%) of 210 patients underwent a complete diagnostic work-up; 70 (33.3%) had an "intermediate" work-up, and diagnosis was based on the only structural imaging for 124 subjects (59.0%). A similar pattern was observed in AD and FTD separately (Figure). However, centres prescribing complete, intermediate and incomplete work-ups were differently represented for the two diagnoses. No statistically significant change emerged in diagnosis, diagnostic confidence or clinical management between complete, intermediate or incomplete assessments (Table). Stratifying patients for etiopathology (AD-FTD) or clinical severity (MCI-dementia) led to the same results. **Conclusions:** Collection of additional core bio-markers does not