P-792 - CORTICAL CHANGES ASSOCIATED WITH DEPRESSION IN ALZHEIMER´S DISEASE: AN MRI SURFACE-BASED MORPHOMETRIC STUDY

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Objectives: Depression is common in Alzheimer´s disease (AD) with important clinical implications, but the etiology is not known.

Methods: 30 subjects (15 with depression and 15 non-depressed matched for age, gender and cognitive impairment) with mild probable AD, defined as Mini-Mental State Examination score of 20 or above, diagnosed according to NINCDS-ADRDA criteria were included in the study. Data were collected at geriatric medicine and psychiatry outpatient clinics at three hospitals in Western Norway and all subjects underwent comprehensive clinical assessment. Montgomery-Asberg Depression Rating Scale with a cut-off point of 6/7 was used to evaluate depression. Automatic preprocessing using Freesurfer included steps for white and grey matter surface reconstruction. The resulting cortical thickness measurement was used in the subsequent GLM-based analysis. Correction for multiple comparisons was carried out cluster-wise by method of Monte Carlo.

Results: We found 3 clusters of significantly reduced cortical thickness in the depressed group. The first cluster (p = 0,0014) contained Left Frontal Pole and Lateral Orbitofrontal cortex. The second cluster (p = 0,0131) included Left Anterior Temporal Area; Right Medial Prefrontal, Anterior Cingulate, Subgenual Cingulate and Medial Orbitofrontal cortex were included in the third cluster (p = 0,0032).

Conclusion: Depression in AD is associated with reduced cortical thickness in prefrontal and anterior temporal cortices. These areas have been found to be associated with depression in other age-related disorders as well as in major depression. This convergence of morphological profiles suggests a possible unity of depression brain mechanisms across disorders.