

P02-145 - **THE NEURAL CORRELATES OF VISUO-SPATIAL WORKING MEMORY IN PATIENTS WITH AMNESTIC MILD COGNITIVE IMPAIRMENT**

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Objectives: The extent of working memory (WM) impairment has rarely been studied in patients with amnesic mild cognitive impairment (aMCI). The aim of the present study was to evaluate the cortical activation in these patients compared to healthy controls while performing a visuo-spatial WM task.

Methods: Functional magnetic resonance imaging (fMRI) with a 3-Tesla head scanner (Allegra, Siemens) was used to investigate the neural correlates of WM in 25 aMCI subjects and 12 matched controls while performing a visual-spatial n-back task (2-back). Both groups were pretested to ensure that all participants were able to understand and perform the task.

Results: In comparison to the healthy subjects, a random-effects analysis revealed that patients with aMCI showed less cortical activation especially in the left superior parietal cortex and left inferior frontal cortex. These areas are known to be involved in the control of attention and visuo-spatial WM.

Conclusions: Our findings suggest that attenuated cortical activation during working memory tasks may provide an early marker for aMCI.