PW01-90 - **INFLUENCE OF APOLIPOPROTEIN E GENOTYPE ON COGNITIVE FUNCTION IN PATIENTS WITH MILD ALZHEIMER DEMENTIA**

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Background: Apolipoprotein E allele ε4 is a well established risk factor for Alzheimer dementia (AD). Its presence modifies also the influence of other risk factors as well as the conversion rate of mild cognitive impairment (MCI) to overt dementia. In how far it also influences the clinical presentation of AD, is not known yet.

Method: Patients of the memory clinic Göttingen were approached if they fulfilled the inclusion criteria: very mild or mild AD according to NINCDS-ADRDA criteria, MMSE 20-30, and at least two of three typical instrumental findings (hippocampal atrophy in MRI, bilateral temporo-parietal hypoperfusion in Neurolite-SPET, low Aβ1-42and increased tau in CSF). They underwent an extensive neuropsychological investigation. A follow-up took place within one year.

Results: N=74 patients (38M, 36F; mean age 68.1y; MMSE 25.9 ± 2.8) and N=28 age- and sex- and education-matched controls could be recruited. N=36 patients had one (N=20) or two (N=16) APOE -ε4-alleles. 53 of 57 CSF analyses revealed AD-typical findings, 64 of 74 cranial MRT revealed bilateral hippocampal or global atrophy and 42 of 64 Neurolite-SPETs showed typical findings. Results of non-memory tests - language, visuospatial ability, attention - did not reveal any difference with regard to APOE genotype. Two memory tests and a memory composite score were significantly worse in the APOE -ε4-positive group and even worse in the homozygote group.

Conclusion: APOE -ε4 influences in a dose dependent manner the neuropsychological functioning in mild AD.

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