CLINICAL CHARACTERISTICS AND APOE GENOTYPE OF PATHOLOGICALLY PROVEN EARLY-ONSET ALZHEIMER'S DISEASE

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Introduction: Early-onset Alzheimer's disease (EOAD) diagnosis often represents a challenge because of the high frequency of atypical presentations.

Aims: To describe the clinical features and APOE genotype of EOAD

Methods: Retrospective revision of the clinical data (age at onset, family history, clinical presentation, diagnostic delay, initial diagnosis, pre-mortem diagnosis) and APOE genotype of patients with neuropathologically confirmed EOAD (< 60 years) from the Neurological Tissue Bank-University of Barcelona/Hospital Clinic. Monogenic EOAD cases were excluded from the analysis.

Results: Forty cases were selected. Mean age at onset was 54.5 years (range 46-60). The mean estimated disease duration was 11 years with a mean diagnostic delay of 3.1 years. 37.5% presented with a non-memory symptom, being behavioural/mood/executive dysfunction the most prevalent presentation in this subgroup. Misdiagnosis with non-AD pathologies was common not only at onset (22.5% global, 4% memory-onset group, 53% non-memory onset group; p=0.001), but also premortem (20%, 4% and 47% respectively; p=0.001). The non-AD premortem diagnoses were 4 FTLD, 2 CBD, 1 Lewy body dementia, 1 unclassifiable dementia. APOE genotype was ε3/ε3 in 59%, with no significant differences between the memory and non-memory group. APOE ε4 positives were 3.3 times more frequent in subjects with a first degree relative affected. 80% presented a Braak&Braak stage VI and 16% stage V. 45% of the patients had concomitant Lewy body pathology.

Conclusion: A fifth of EOAD were misdiagnosed during life, especially the non-memory presentations. APOE ε4 was more frequent in familial cases but did not seem to influence the clinical phenotype.