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Prevalence of cerebrospinal fluid Alzheimer disease-like pattern in atypical dementias

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Author(s)

A. Padovani, A. Benussi, F. Ferrari, S. Archetti, B. Borroni

ABSTRACT

BACKGROUND: Differential diagnosis between Frontotemporal Dementia (FTD), Corticobasal Syndrome (CBS), Progressive Supranuclear Palsy Syndrome (PSP), FTD with motor neuron disease (FTD-MND) is often challenging, because of the occurrence of atypical cases. Autopsy series have identified Alzheimer Disease (AD) pathology in a consistent percentage of patients with atypical dementias. It has been demonstrated that Cerebrospinal Fluid (CSF) Tau/Aβ_{42} dosage is a reliable marker for AD. OBJECTIVE: To evaluate the presence and percentage of CSF AD-like patterns (high CSF tau/Aβ_{42} ratio) in patients with atypical dementias in order to identify an ongoing AD neurodegenerative process. METHODS: One hundred seventy two consecutive patients fulfilling current clinical criteria for behavioural variant FTD (bvFTD, n = 73), agrammatic variant of Primary Progressive Aphasia (avPPA, n = 19), semantic variant of PPA (svPPA, n = 12), FTD-MND (n = 5), CBS (n = 42), PSP (n = 21) were recruited and underwent CSF analysis. CSF AD-like and non AD (nAD-like) patterns were identified. RESULTS: CSF AD-like pattern was reported in 6 out of 73 cases (8.2%) in the bvFTD group, in 3 out of 19 (15.8%) in the avPPA group, and in 7 out of 42 (16.7%) in the CBS group. One out of 12 (8.3%) of svPPA had CSF AD-like pattern. None of patients FTD-MND and PSP had CSF AD-like pattern. No differences in demographic characteristics were detected between subgroups in each phenotype. CONCLUSIONS: Our findings convey that the CSF tau/ Aβ_{42} ratio could be found in a proportion of cases with clinical bvFTD, avPPA and CBD. Detecting an *on-going* AD pathological process in atypical dementias has several implications for defining distinctive therapeutic approaches, guiding genetic screening and helping in patients' selection in future clinical trials.

KEYWORDS

CSF; Alzheimer Disease; Atypical Dementias; Frontotemporal Dementia; Corticobasal Syndrome; Progressive Supranuclear Palsy

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