

NfL as a blood biomarker for FTD and others neurodegenerative diseases in primary psychiatric context.

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State of the art: Frontotemporal dementias (FTD) are characterized by behavioral disorders and deficits in executive and language functions. A current challenge is to distinguish this pathology with primary psychiatric disorders (PPD) natural evolution with age, because of frontal dysconnectivity described in severe psychiatric diseases, and the overlap of some behavioral symptoms between FTD and PPD in older adults. NfL is a key biomarker of neurodegeneration and its determination in CSF and blood has shown strong informativeness in various clinical contexts. Because standard investigations for neurodegenerative diseases are not easy to perform in older adults with PPD, blood NfL assessment could be a non-invasive biomarker of cerebral pathological aging useful in this population.

Methodology: Blood NfL was measured using ultrasensitive quantification test SimoA in outpatients referred to the gerontology department of Montpellier's university hospital for the question of differentiation between FTD and PPD. Association between NfL rates and neuropsychological scales or brain imagery when available was assessed. Confirmation of diagnosis of cerebral pathological aging was evaluated, just as its impact on patient's outcome.

Results: A total of 70 patients have been included in this study. The exact diagnostic performance of NfL is under way but the interest of pathological aging trajectory diagnosis is individually relevant for the clinician as illustrated with two patients (suffering from neurodevelopmental disorder or resistant depression).

Conclusion: Our results confirm the relevance of serum NfL dosage to exclude or confirm FTD prodromal pathology in patients with PPD.

Conflicts of interest

N/A