Poster Presentations

Dementia and Cognitive Disorders

P.001

Factors associated with having a will, power of attorney and advanced healthcare directive in patients presenting to a rural and remote memory clinic

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Background: A will, power of attorney and advanced healthcare directive are critical to guide decision-making in people with cognitive decline. We identified characteristics that are associated with the existence of these documents in patients who presented to a rural and remote memory clinic (RRMC). **Methods:** 95 consecutive patients were included in this study. Patients and caregivers completed questionnaires on initial presentation to the RRMC and patients were asked if they have legal documents. Patients also completed neuropsychological testing. Statistical analysis (t-test and χ^2 test) was performed to identify significant variables. **Results:** 70 patients had a will, 62 had a power of attorney and 21 had an advanced healthcare directive. Having a will was associated with good quality of life (p=0.001), living alone (p=0.034), poor verbal fluency (p=0.055) and European ethnicity (p=0.028). Factors associated with having a power of attorney included good quality of life (p=0.031), living alone (p=0.053) and poor verbal fluency (p=0.015). Old age (p=0.015), poor verbal fluency (p=0.023) and severity of cognitive and functional impairment (p=0.023) were associated with having an advanced healthcare directive. **Conclusions:** Our results indicate that poor quality of life, good verbal fluency, non-European ethnicity and living with others are associated with a lower likelihood of creating legal documents in patients with cognitive decline

P.002

Exosomal miR-204-5 and miR-632 in CSF are candidate biomarkers for frontotemporal dementia: a GENFI study

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Background: To determine whether exosomal microRNAs (miRNAs) in CSF of patients with FTD can serve as diagnostic biomarkers, we assessed miRNA expression in the Genetic FTD Initiative (GENFI) cohort and in sporadic FTD. **Methods:** GENFI participants were either carriers of a pathogenic mutation or at risk of carrying a mutation because a first-degree relative was a symptomatic mutation carrier. Exosomes were isolated from CSF of 23 pre-symptomatic and 15 symptomatic mutation carriers, and 11 healthy non-mutation carriers. Expression of miRNAs was measured using qPCR arrays. MiRNAs differentially expressed in symptomatic compared to pre-symptomatic mutation carriers were evaluated in 17 patients with sporadic FTD, 13 patients with sporadic Alzheimer's disease (AD), and 10 healthy controls (HCs). **Results:** In the GENFI cohort, miR-204-5p and miR-632 were significantly decreased in symptomatic compared to pre-symptomatic mutation carriers. Decrease of miR-204-5p and miR-632 revealed receiver operator characteristics with an area of 0.89 [90% CI: 0.79-0.98] and 0.81 [90% CI: 0.68-0.93], and when combined an area of 0.93 [90% CI: 0.87-0.99]. In sporadic FTD, only miR-632 was significantly decreased compared to sporadic AD and HCs. Decrease of miR-632 revealed an area of 0.89 [90% CI: 0.80-0.98]. **Conclusions:** Exosomal miR-204-5p and miR-632 have potential as diagnostic biomarkers for genetic FTD and miR-632 also for sporadic FTD.

P.003

Feasibility and validity of a novel video-conference administration protocol for the NIH toolbox - cognition battery

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Background: The NIH Toolbox - Cognition Battery (NIHTB-CB) is a computerized cognitive assessment designed for clinical research that is administered in-person. Here, we explored the feasibility and validity of a novel video-conference protocol for administering the NIHTB-CB. Since our protocol required repeated assessments, we further explored the NIHTB-CB's practice effect. **Methods:** Twenty-five healthy participants completed the NIHTB-CB under two separate conditions four weeks apart. The standard condition followed the recommended administration protocol, whereas the video-conference condition had the examiner and participant in separate rooms but able to communicate over video-conference. A linear mixed-model analysis was performed to explore the fixed effect of testing condition and time on NIHTB-CB performance. **Results:** Across all three NIHTB-CB composite scores (total, fluid and crystallized cognition) no significant fixed effect of administration condition was found. A significant practice effect was observed for the fluid and total cognition composite scores over a 29.0 (± 2.1) day test-retest interval. **Conclusions:** Our novel video-conference protocol for the NIHTB-CB is equivalent to the standard protocol in healthy participants, and may provide a solution for researchers seeking to engage study participants at remote sites. If the NIHTB-CB is used longitudinally to monitor patients, corrections for repeated measures may be required.