Neuropsychiatric and cognitive aspects of early stages of Alzheimer´s disease and other neurodegenerative disorders in late-life

Abstract

The early diagnosis of Alzheimer's disease (AD) is currently focused on the stages preceding the dementia syndrome, i.e. the preclinical stage and the mild cognitive impairment (MCI) stage. However, the detection of AD using specific biomarkers of beta amyloid and tau protein is limited in clinical practice and often costly or invasive. Therefore, the detection of early clinical signs of AD continues to be invaluable. The aim of this dissertation is to contribute to the early diagnosis of AD by examining specific cognitive markers as well as neuropsychiatric symptoms (NPS), which have so far received little research and clinical attention. The first study introduces criteria for what is termed mild behavioral impairment (MBI), a syndrome analogous to mild cognitive impairment (MCI) describing new-onset and persistent NPS in older adults, and maps MBI symptoms across the cognitive spectrum with the Mild Behavioral Impairment Checklist (MBI-C), translated and adapted in this study. The second study shows that the severity of MBI-C symptoms, particularly impulse dyscontrol and decreased motivation in non-demented older adults, is associated with lower volume or thickness of structures in the medial temporal lobe, i.e., structures affected in the early stages of AD. The third study compares the potential of four traditionally used memory tests and other cognitive tests to predict the conversion of dementia in individuals with MCI and demonstrates that memory tests containing delayed recall are the best predictors. Thus, the use of memory tests with delayed recall and focusing also on changes in behavior and mood is useful in the early diagnosis of AD.

Keywords