Abstrakt

Early and differential diagnosis of Alzheimer's disease is associated mainly with the aim to depict hippocampal and mediotemporal impairment. Its massive impairment is present already in early stages.

Given that mediotemporal lobe structures are anatomically and functionally closely associated with the olfactory brain, I was involved in examination of smell. In a group of patients with mild cognitive impairment (MCI) we found that olfactory identification is similarly impaired in amnestic (aMCI) which precedes commonly Alzheimer's dementia and in nonamnestic (naMCI) subtype, ), in which patients often also converted into other types of dementia. Olfactory impairment is proportional to cognitive impairment in aMCI but not in naMCI.

In another study of olfactory identification with our original smell test called MHST we focused on the evaluation of patients with clinical subtypes of FTLD at the stage of mild dementia. We demonstrated impaired smell identification in all tested clinical subtypes.

In another work, I tried to find a neuropsychological test reflecting selectively hippocampal impairment. I compared several standard memory tests in relation to the ability to reflect hippocampal atrophy in nondemented elderly and came to the conclusion that the Enhanced Cued recall test (ECR) with controlled encoding and cued recall that was designed specifically to depict hippocampal dysfunction does not exceed the standard memory tests without this paradigm.

In subsequent study we tested ECR in patients with mild dementia and examined its discriminatory ability in differentiating AD and bvFTD. In these cognitive more impaired groups we have confirmed its high sensitivity and specificity to distinguish between AD and bvFTD and hence between hippocampal and frontal type of memory.

In further studies we investigated the contribution of the test clock and test spatial navigation to early and differential diagnosis of cognitive impairment in geriatric population.