

Dysfunction of the magnocellular pathway in Alzheimer's disease.

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Visual disturbances are a common feature of Alzheimer's disease. They are related primarily to visuo-spatial deficits. The pathways mediating visuo-spatial and form identification are at least partially segregated in the brain. The magnocellular pathway has characteristics which make it more suitable for detecting dynamic form, motion and depth. We assessed by means of psychophysical and electrophysiological testing the properties of the parvo and the magnocellular pathways. We found contrast sensitivity deficits for the low and middle spatial frequencies, a significant reduction of the amplitude of the steady-state pattern VEP's at 16, 20 and 24 Hz, abnormal transient pattern VEP's only for the major positivity (P100) and abnormal flash VEP's (delayed P2) as previously observed. The temporal frequency deficits and other abnormalities pointed out in this study, could be related to a dysfunction of the M-pathways in Alzheimer's disease.