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Titel des Beitrags:
Increased Intrinsic Activity of Medial-Temporal Lobe Subregions is Associated with Decreased Cortical Thickness of Medial-Parietal Areas in Patients with Alzheimer's Disease Dementia.

Abstract:
In Alzheimer's disease (AD), disrupted connectivity between medial-parietal cortices and medial-temporal lobes (MTL) is linked with increased MTL local functional connectivity, and parietal atrophy is associated with increased MTL memory activation. We hypothesized that intrinsic activity in MTL subregions is increased and associated with medial-parietal degeneration and impaired memory in AD. To test this hypothesis, resting-state-functional and structural-MRI was assessed in 22 healthy controls, 22 mild cognitive impairment patients, and 21 AD-dementia patients. Intrinsic activity was measured by power-spectrum density of blood-oxygenation-level-dependent signal, medial-parietal degeneration by cortical thinning. In AD-dementia patients, intrinsic activity was increased for several right MTL subregions. Raised intrinsic activity in dentate gyrus and cornu ammonis 1 was associated with cortical thinning in posterior cingulate cortices, and at-trend with impaired delayed recall. Critically, increased intrinsic activity in the right entorhinal cortex was associated with ipsilateral posterior cingulate degeneration. Our results
provide evidence that in AD, intrinsic activity in MTL subregions is increased and associated with medial-parietal atrophy. Results fit a model in which medial-parietal degeneration contributes to MTL dysconnectivity from medial-parietal cortices, potentially underpinning disinhibition-like changes in MTL activity.

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