

O-05 - VISUAL ASSESSMENT OF HIPPOCAMPO-HORN PROPORTION ON BRAIN MRI AS SIMPLE METHOD FOR SEMI-QUANTIFICATION OF THE HIPPOCAMPUS IN ALZHEIMER DISEASE

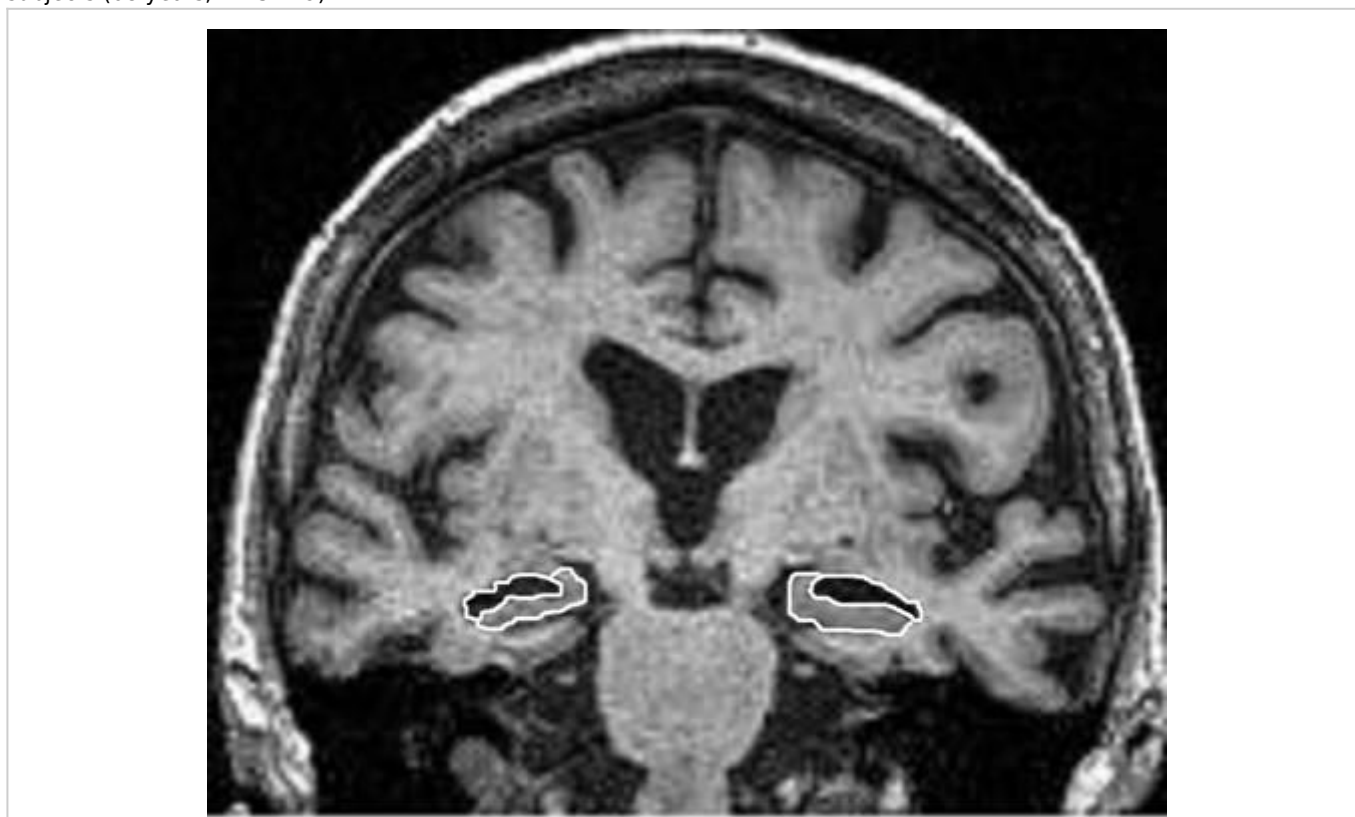
A.Bartos^{1,2}, P.Zach³, J.Tintera⁴, D.Ripova¹

¹AD Center, Prague Psychiatric Center, ²Department of Neurology, ³Institute of Anatomy, Charles University in Prague, Third Faculty of Medicine, ⁴Institute of Clinical and Experimental Medicine, Prague, Czech Republic

Introduction: Diagnosis of Alzheimer disease (AD) can be supported by hippocampal atrophy on brain MRI. A quick and easy evaluation of the hippocampus is necessary for clinical practice.

Aims: To develop a simple visual method for a stratification of a hippocampal size in patients with AD.

Patients and methods: We manually traced hippocampal (hipp) and temporal horn (horn) areas of both sides on a single coronal T1-weighted image (fig.) in 26 AD patients (medians: age 77 years, MMSE 19 points) and in 29 non-demented elderly subjects (68 years, MMSE 29).



[Hippocampo-horn proportion on brain MRI]

Results: Common hipp+horn areas did not differ between the AD patients and the controls. The hipp area occupies a significantly smaller proportion out of the combined hipp+horn areas in the AD patients (dx 64 %, sin 62 %) than that in the controls (dx 83 %, sin 82 %) ($p < 0.00003$). Individuals with the hippocampal area of 50 % and less out of the combined hipp+horn areas always had AD. This can be easily estimated by a visual comparison of two areas (hipp and horn).

Conclusion: The size of the hippocampus on brain MRI can be semi-quantified by the comparison of the hippocampal area with the temporal horn area.

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