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

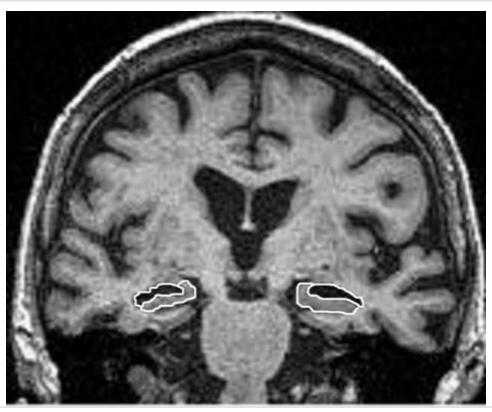
A.Bartos<sup>1,2</sup>, P.Zach<sup>3</sup>, J.Tintera<sup>4</sup>, D.Ripova<sup>1</sup>

<sup>1</sup>AD Center, Prague Psychiatric Center, <sup>2</sup>Department of Neurology, <sup>3</sup>Institute of Anatomy, Charles University in Prague, Third Faculty of Medicine, <sup>4</sup>Institute 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.

Supported: By MSMT 1M0517, IGA MH CR NS 10369-3 and MZ0PCP2005.