P-522 - VAGUS SOMATOSENSORY EVOKED POTENTIALS IN SUBJECTS WITH MAJOR DEPRESSION

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Introduction: Vagus somatosensory evoked potentials (VSEP) were proposed for the detection of Alzheimer´s disease (AD) because of the degeneration of specific brainstem structures including Vagus nuclei early in the course of disease.Our objective was to contribute a means for differentiating between Major depression (MD) and AD.Our aim was to investigate if VSEP will be able to differentiate between healthy controls and MD where opposite to AD no brainstem involvement should occur.

Methods: In 57 subjects with MD and 57 healthy controls the stimulation of the auricular branch of the Vagus nerve (ABVN) was done at the inner side of the tragus applying electrical square impulses (0.1msec duration, interstimulus interval 2sec, stimulus intensity 8mA). Evoked potentials were recorded bipolarly from the electrode positions C4-F4 and Fz-F4 (band-pass 0.1Hz to 1kHz, analysis time 10msec, averaging of 100 artefact-free epochs). Statistical analyses were performed by means of ANOVAs for repeated measurements with the inner-subject factor “recording site” and the between-subject factor “diagnosis”.

Results: ANOVAs for the VSEP latencies P1, N1 and P2 did not show any significant effect including the factor “diagnosis”.Conlusions VSEP latencies did not show statistically significant differences in subjects with MD as compared to healthy controls. This finding not only underpins the specifity of the results of VSEP in AD with longer latencies in patients than in controls but also points to a possibility to use VSEP as a method for the differential diagnosis of AD and MD which is often difficult to afford in older patients.

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