This result was found for startle probes presented at 2.5s, but not at longer intervals.

Conclusions: The MN system is involved in emotional processing, as shown by modulation of the startle reflex when a negative picture is primed with emotionally congruent biological motion. Further, this modulation occurs only when the time interval between picture presentation and startle probe is relatively short, suggesting that the MN system may provide an early warning of threat-related actions.

P313

Increase of prefrontal cortex blood flow during trail making test

M. Kubo [1], Y. Kitamura [2], K. Kinugasa [2], M. Okamoto [1]. [1] *Graduate School of Health Sciences, Okayama University, Okayama, Japan* [2] *Okayama Ryogo Center, Okayama, Japan*

Background and aims: Trail making test (TMT) was developed as a neuropsychological test evaluating frontal lobe function. However, the contribution of frontal lobe in results of TMT is still controversial because studies in patients with brain injuries suggest the role of basal ganglia rather than frontal lobe in results of TMT.

Methods: To examine the contribution of frontal lobe in the results of TMT, we measured blood flow in frontal cortex during performance of computer version TMT-A and TMT-B.

Sixteen healthy student volunteers (8 male, 25.9±5.3 year old; 8 female, 22.0±2.9 year old) was used in the study. Seven laser beam probes and 8 sensor probes were put on frontal lobe, and absorbance of 695 nm and 830 nm infrared beams were measured at 10Hz by optic topography (ETG 4000, Hitachi, Medical Corporation, Tokyo, Japan).

Results: Concentration of deoxyhemoglobin was decreased while concentration of oxyhemoglobin was increased in the prefrontal cortex during the performance of TMT-A and TMT-B.

Conclusions: The results suggest that blood flow increases in the prefrontal cortex during the performance of TMT, and possible involvement of this brain region in the performance of TMT.

P314

Circadian rhythm of malondialdehyde formation in healthy subjects

A.L. Morera [1], P. Abreu [2], M. Henry [3], A. Garcia-Hernandez [4], F. Guillen-Pino [1], A. Intxausti [5], A. Orozco [3], E. Díaz-Mesa [5], F. Trujillo [3], J. Monzon [3], C.D. Díaz-Melian [3], R. Gracia [1]. [1] *Department of Internal Medicine, Dermatology and Psychiatry, University of La Laguna, Canary Islands, Spain* [2] *Department of Physiology, University of La Laguna, Canary Islands, Spain* [3] *Service of Psychiatry, University Hospital of The Canary Islands, Canary Islands, Spain* [4] *Nursing School, University of La Laguna, Canary Islands, Spain* [5] *Service of Psychiatry, La Candelaria University Hospital, Canary Islands, Spain*

Objective: Malondialdehyde (MDA) is a common biologic marker of oxidative stress used in psychiatric research. Data regarding MDA levels in healthy subjects are controversial. One factor affecting MDA levels may stem from the existence of a circadian rhythm of MDA formation. The objective of this study consists of investigating whether MDA formation has a circadian rhythm of formation in healthy human subjects.

Methods: The sample was comprised by 9 healthy male subjects. None of them had a history of medical or neurological disease and routine laboratory parameters were normal. The study was carried out in accordance with the Helsinki Declaration and all subjects gave written informed consent before their inclusion. Blood samples were extracted at 12:00 and 2:00 in December 2004. The same routine was followed during the two experimental sessions. Serum MDA was determined by the thiobarbituric acid reactive substance (TBARS) according to the method of Ohkaba et al (1979).

Results: The sample was comprised by 9 male healthy subjects (age 33.0±11.7). There were significant differences in MDA levels between 12:00 and 2:00 (2.33±1.01 vs. 1.58±0.48, $p<0.015$).

Conclusions: MDA has a circadian rhythm of formation with higher levels at 12:00 than 2:00. This variation in circadian MDA levels of formation should be accounted when researching in this field.

P315

The medium latency auditory evoked response in attention deficit disorder and hyperactivity

S. Mourente-Diaz [1], M. Dominguez-Santos [2], C. Morla-Boveda [1], J. Otero-Costas [1]. [1] *Neurofisiologia Clinica, Hospital Clinico Univesitario, Santiago de Compostela, La Coruna, Spain* [2] *Psiquiatria Infantil, Hospital Clinico Univesitario, Santiago de Compostela, La Coruna, Spain*

The Attention Deficit Disorder and Hyperactivity (ADDH) is now, a frequent diagnosis in Paediatrics Psychiatry. This real neurobiological syndrome has a variable incidence (3-12%), an early beginning (before 7 years) and an important permanency in adult age (15-20% keep diagnosis and 65% residual symptoms). It represents a risk factor for posterior psychiatric diseases, antisocial behaviour and relation problems. This makes the early diagnosis and treatment necessary. The 70-90% of the patients responds to simpatico mimetic treatment and the methylphenidate is the most used. Patients must carry out the clinical criteria and nowadays there is not any recognized helpful test for the diagnoses except the clinical one. The medium latency auditory evoked response (MLAER) appears 10-70 ms after the cochlear receptor activation and it has cortical and subcortical generators.

We studied MLAER in ADDH: their morphology, changes with treatment and relation between morphology changes and clinical response to treatment.

Patients (53) had ADDH clinical criteria, methylphenidate treatment chosed, not comorbidity neither hearing loss. First phase without treatment and second with it where we did MLAER and troncoencephalic auditory evoked response during wakefulness and sleep.

Without treatment 76% responses were asymmetric (51% of them with a specific type). The rest 23% were normal. With treatment 63% changed the morphology and 70% had a good response to treatment. Only 11% of patients without alterations had a good clinical development.

An ADDH diagnosis has different physiopathologic mechanism. The MLAER in ADDH could predict the treatment response.

P316

Orexin-a, body weight, and physical activity relationships in the rhesus monkey

D.E. Roberts [1], D.L. Rosene [1,2]. [1] *Department of Anatomy and Neurobiology, Boston University School of Medicine, Boston, MA, USA* [2] *Division of Neuroscience, Yerkes National Primate Research Center, Emory University, Atlanta, GA, USA*

https://doi.org/10.1016/j.eurpsy.2007.01.1050 Published online by Cambridge University Press