P90 *Neurosciences, psychopharmacology and biological psychiatry*

DECREASED CORTICAL THICKNESS IN THE NEOCORTEX IN PATIENTS WITH SCHIZOPHRENIA: A MORPHOMETRIC POST-MORTEM ANALYSIS

E. Kovari *Department of Psychiatry "Belle Idee", 2 ch du Petit Bel-Air, 1225 Chene Bourg, Switzerland*

We performed a morphometric post-mortem analysis of the cerebral cortex in 24 patients with schizophrenia (10 men, 58.9+5.2 years old, 14 women 64.5+4.3 years old; age range 25-92 years) and 28 age-matched controls. Tissue blocks were taken from the superior frontal cortex, inferior temporal cortex and occipital cortex. Subsequently, 20um thick sections were prepared with Globus silver impregnation as previously described (Vallet et al). Cortical thickness (mm) was measured in areas 9, 20 and 18 using a computer assisted image analysis system consisting of a Zeiss-Axioplan microscope, a high sensitivity LH-4036 camera (LHESA Electronic), a COMPAQ Deskpro 386/20 microcomputer, and a SAMBA TM 2005 software system developed by TITN Inc. (Alcatel, Grenoble, France). Cortical thickness was significantly reduced in patients with schizophrenia compared to controls in areas 9 (1.99 ± 0.06 vs 2.49 ± 0.07) and 20 ($2.22 + 0.08$ vs 2.71 ± 0.1). Conversely no significant difference was found in area 18 between the two diagnosis groups (schizophrenics $2.02 + 0.08$, controls $2.09 + 0.06$). In conjunction with previous data our observations suggest that decrease of cortical thickness in neocortical association areas of the frontal, temporal and cingulate cortex may be a valuable pathological hallmark of schizophrenia.

P91 *Neurosciences, psychopharmacology and biological psychiatry*

MELATONIN AS AN ANTICONVULSANT?

I. P. Lapin, S. M. Mirzaev, I. V. Ryzov. *Department of Clinical and Experimental Psychopharmacology, Bekhterev Psychoneurological Research Institute, Bekhterev str. 3, St. Petersburg 193019, Russia*

Objective: to find the endogenous antagonists of quinolinic acid (QUIN), an endogenous convulsant from a group of agonists of NMDA receptor. So far only a few antagoniss have been found, namely cerulein and quinaldic acid in mice and kynurenic acid in rats.

Method: In SHR (bred from Swiss) male mice various consultants were administered i.c.v. and standard parameters of generalized seizures were measured.

Results: Pre-treatment with melatonin (MEL, 1.25/10 g (NOTA) i.c.v.) attenuated the convulsant effect of (in descending order of efficacy) QUIN, kainate, glutamate, NMDA and PTZ. MEL was ineffective against i.p. administered PTZ. Systematically administered MEL was selectively effective against QUIN.
Conclusion: MEL which is widely used in treatment for insomnia, jet lag and other disorders of the CNS could be used in epilepsy and convulsive states as well as against neurodegenerative disorders because QUIN is supposed to be important in these diseases.

P93 *Neurosciences, psychopharmacology and biological psychiatry*

EYELID CONDITIONING - A NON MOTIVATION-DEPENDENT TOOL TO INVESTIGATE TEMPORAL LOBE FUNCTION IN SCHIZOPHRENIA

D Maierhofer, K. Dantendorfer, E Hofer, J Windhaber, M. Eberstaller

Universitätsklinik für Psychiatrie Wien
Chairman. Professor H Katschnig

Introduction: In schizophrenia (SZ) deficits in different cognitive functions such as abstraction, language, memory and learning have been reported Memory and learning deficits seem to play a stronger role than has been previously accepted and should be considered as more "specific" to SZ than other cognitive dysfunctions.

Conditional discrimination learning based on eyelid conditioning is an experimental paradigm that has been shown to be selectively sensitive in testing temporal lobe function and has not yet been used in SZ research A major advantage of this procedure is the fact, that it makes minimal demands on attentional capacities and motivation

Methods. We present the technical methodology of this new procedure, which is actually used in an ongoing study aiming to investigate temporal lobe function in SZ Three groups of SZ patients according to DSM-III-R (different ages of onset and illness durations) and matched controls are examined

Aims of the presentation: The possibilities of this new approach to SZ research are presented by showing preliminary data on SZ patients and matched healty controls

P94 *Neurosciences, psychopharmacology and biological psychiatry*

BORRELIA BURGDORFERI: A RISK FACTOR FOR ALZHEIMER'S DISEASE

R. Marquand, R. Muller. *Psychiatrische Klinik der Technischen Universitat Munchen Station 73, Ismaningerstr 22, Munchen, Bayern 8675, Germany*

Objective: The gene for apoliprotein E type 4 is a risk factor in sporadic Alzheimer's disease (AD) but it is not essential for the development of the disease. Inflammatory factors are presumably involved too. Borrelia burgdorferi can affect the central nervous system. We examined if AD is related with non-symptomatic borreliosis.

Method: 72 AD patients according to the NINCDS-ADRDA criteria were consecutively recruited. The age matched control group consisted of cognitively intact unrelated individuals. ELISA and Western blot tests were used to examine serum samples and the cerebrospinal fluid (CSF).

Results: 28% of the AD patients but only 7% of the controls had Lyme Borreliosis antibodies in the serum sample. None of them had intrathecal antibody production as examined in the CSF.

Conclusion: If our data are valid, B. burgdorferi is an important environmental factor for AD. Cross-reactivity of B. burgdorferi antibodies with neuronal issue or the triggering of a nonspecific inflammatory response are discussed. Other authors detected higher frequencies of Herpes simplex virus in post mortem AD brains.

https://doi.org/10.1016/S0924-9338(97)80664-5 Published online by Cambridge University Press