P0338

Association between anxiety, depression and cognitive dysfunction in patients with multiple sclerosis

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Background and Aims: Neuropsychiatric literature demonstrates the high impact of cognitive deficits in patients with Multiple Sclerosis (MS), as well as the increased prevalence of anxiety and depression in patients with chronic illnesses, especially in the subgroup of MS patients. The aim of our study is to investigate the existence of an association between depression, anxiety and cognitive deficits in patients with MS.

Methods: Demographic data, MS subtypes, and years since diagnosis were documented for 60 patients with MS, who participated in our study. Patients were evaluated for depression and anxiety by the Beck's Depression Inventory (BDI) and the Spielberger's questionnaire (State-Trait Anxiety Inventory) respectively. The Symbol Digital Modalities Test (SDMT) was used to evaluate cognitive deficits.

Results: According to our preliminary data, 60% of MS-patients scored higher than normal in the BDI. There was a significant negative correlation between years since diagnosis and SDMT (Pearson's correlation <0.01), as well as between BDI and SDMT (Pearson's correlation <0.01). No correlation was established between anxiety and both depression and SDMT.

Conclusions: Depression and cognitive deficits have a high prevalence in patients with MS. This is due to the severity and chronicity of MS. In our study, depression is strongly associated with cognitive deficits and years since diagnosis of MS, although it is still in progress for further data evaluation. More studies are required to elucidate the cause of this established association.

P0339

Metyrapone and Mifepristone reverse memory loss induced by spontaneous Morphine withdrawal in mice

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Morphine withdrawal leads to an increase in corticosterone concentration in plasma, and cognitive deficits are found, after withdrawal. Evidence indicates that glucocorticoid hormones affect memory. The aim of the current study was to evaluate the effects of metyrapone and mifepristone on memory deficit following spontaneous morphine withdrawal. Memory was experienced by using the object recognition task. Novel object recognition task was carried out in a square wooden open-field apparatus using objects. The test was comprised of three sections; habituation for 15 min, first trial for 12 min and test trial for 5 min. In this learning paradigm, the difference in exploration between a previously seen object and a novel object is taken as an index of memory performance (recognition index, RI). Male mice were made dependent by increasing doses of morphine (30-90 mg/kg) subcutaneously twice daily for three days. RI was assessed 4 hour after the last dose of morphine on the third day. Mifepristone (50,100 mg/kg) and metyrapone (12.5, 25 mg/kg) were used subcutaneously before the first trial and effects were compared with control values. Metyrapone 25 mg/kg, and mifepristone 50mg/kg improved RI to 34.8 ± 10.8 % and 25.4 ± 11.7 % respectively, which are significantly different from control values (RI= -14.8 ± 10.7 %, $P< 0.05$). These results show that increased glucocorticoid concentration can be involved in memory deficit caused by morphine withdrawal. Therefore metyrapone by inhibiting glucocorticoid formation and mifepristone by inhibiting glucocorticoid receptors can be useful for preventing memory deficit following morphine withdrawal.

P0340

Speech disturbances in children aged 18 yrs at early onset of epilepsy

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The aim of the study is the estimation of the level of development of speech and estimation teh importance of risk factors which can disturb development first stages of human development. 40 patients aged 1- 8 yrs of age participated in the study. They underwent psychological, neurological and phycsiotherapeutical evalutaion. The inclusion criteria included the prevalence some perinatal disturbances as risk factor of developmental delay and pervalence the epilepsy treated with conventional or novel antiepileptic drugs (AEDs). The data from Apgar Scale used as well. Parents confirm the agreement for the examinations as well. The Developmental Scale Denver and Brunet- Lezine, AFA Scale for Children and Neuropsychological Tasks Set used in the study.

The analysis of variance with SPSS support used for revision of hypothesis. The mean of IQ was 65 in examined group. The speech disturbances in understanding corelated to intellectual delay as well. 20 children have problems with walking and revealed the objectives of intellectual impairment additionally. 17 children had problems with social contacts and verbal expression of needs.

The results show there was strict connection between the time of occurence of epilepsy and the speech disturbances, data important on p.0.01. There was no significant impact of epilepsy treatment on cognitive funtions, especially speech, but the efficacy of treatment correlated with IQ parameters.

In conclusion – early onset of epilepsy and non –efficient control of seizureas are the main factor which disturb normal development of speech on level of expression and impression.

P0341

Memantine induces expression of PLA2 genes in rat brain: Possible implications for reverse learning and memory of Alzheimer's disease patients

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Memantine, an aminodamantane, is an non-competitive NMDA receptor antagonist with strong voltage-dependence and fast kinetics. Unlike other drugs used to treat Alzheimer's disease, memantine blocks NMDAR channels in a concentration, time and voltage-dependent fashion. Previous results of our group evidenced a correlation of

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