

Poster Session II

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Poster Session II: Alzheimer Disease and Dementia

P0001

A Possible role for Cyclosporin-A, at smaller Rheumatoid Arthritis treatment doses, in the treatment of Alzheimer's Disease

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Steroids as testosterone (T), progesterone (P) as well as gluco/mineralocorticoids, are reduced by steroid 5 α -reductase (5AR) to 5 α -dihydrotestosterone (DHT) and 5 α -dihydroprogesterone (DHP). DHT and DHP are further reduced by 3 α -hydroxysteroid dehydrogenase (3AHS) to 3 α -androstenediol (A-diol), and 3 α -5 α -tetrahydroprogesterone (THP/allopregnanolone); 5AR is the rate-limiting enzyme. Cyclosporin-A (CSA) stimulates 5AR. CSA is given to organ transplant patients to prevent organ rejection. A dose-dependent side effect of CSA is hypertrichosis, from increased production of DHT etc.

Both DHT and A-diol have cognitive enhancing effects; Adiol may be more potent. T and P metabolites potentiate GABA. They are neuroprotective, and reverse diabetic neuropathy. Allopregnanolone promoted "neurogenesis in vitro and in vivo in transgenic mouse model of Alzheimer's disease (AD)." Allopregnanolone "levels are inversely correlated with neuropathological disease stage" in prefrontal cortex of AD patients. Such 'positive effects' are substantially reduced by finasteride, a 5AR inhibitor. CSA has also been used to alleviate rheumatoid arthritis symptoms at smaller doses.

Plausibly, CSA could enhance cognitive functions, reverse diabetic neuropathy, and could be used in the treatment of confirmed cases of AD. Indomethacin inhibits 3AHS; it is given to AD as a 'NSAID', which could even be counterproductive. Since animal models of both AD and diabetic neuropathy can be created, CSA at varying doses can be tried in such models in several ways, such as adding P, and/or T, to CSA to enhance the production of allopregnanolone and A-diol, and of other neuroactive steroid metabolites. Furthermore, more potent 5AR stimulators could be synthesized.

P0002

Treatment of depression associated to Alzheimer disease

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Background and Aims: Alzheimer disease (AD) is the most common form of degenerative dementia, associating to cognitive and non-cognitive symptoms a progressive decline of social functioning. Depression in AD often has psychotic features, with major anxiety and agitation, dysphoria, anhedonia and important social dysfunction.

Method: Sample of 50 patients, with at least one hospitalization from January 1st, 2007 to June 30th, 2007. Patients' ages were between 55 and 65 years. There were 28 women and 28 male patients. During study period, 27 patients (15 women and 12 male) which presented depressive symptoms received tianeptine – 37.5 mg/day associated to specific treatment of dementia (cholinesterase inhibitors); 8 patients also received atypical antipsychotics during hospitalizations. All patients were assessed using MMSE scale (day 1, 14, 28, month 2, 3 and 6). Hamilton Scale for Depression (HAM-D) was applied to patients who presented depressive symptoms, at same intervals.

Results: A clear relationship between the increase of MMSE and the improvement of HAM-D scores was highlighted in depressive patients with AD, especially after 3 months of associated therapy. Hospitalization periods were briefer in patients who received tianeptine and most of them did not present psychotic features.

Conclusions: Antidepressants seem to improve both depressive symptoms and cognitive impairment in patients with AD. Treatment of depression associated to AD is likely to have a higher importance that seemed. Without denying the role of specific treatment for dementia, we consider that the improvement of depression in AD patients has beneficent effects on cognitive impairment and behavior.

P0003

Does the association between social anxiety disorder and Parkinson's disease really exist? Study of prevalence in an outpatient clinic sample

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Background and Aims: Social Anxiety Disorder (SAD) is a psychiatric co-morbidity commonly related to Parkinson's disease (PD).

However, the real nature of this association is still unknown. The objective of the present study was to determine the prevalence of SAD in patients with a diagnosis of PD.

Methods: Eighty-seven consecutive patients with a diagnosis of PD and no associated dementia were evaluated at a movement disorder outpatient clinic. The patients were independently interviewed using the SCID-IV for DSM-IV.

Results: Patient age ranged from 24 to 85 years (mean: 60.7 years) (+13.2). Forty-five patients (51.7%) were women and 42 (48.3%) were men. The lifelong prevalence of SAD was 32.2%. However, only 16.1% presented this anxiety disorder before the beginning of PD. The prevalence of SAD with onset after PD, i.e., secondary to a movement disorder, was 16.1%, with no sex differences in SAD prevalence among PD patients.

Conclusions: The high rate of SAD among PD patients detected in the present study (32.1%) is comparable to those reported in other countries. However, the prevalence of patients who presented SAD before the onset of PD (16.1%) was similar to that reported for the general population. Thus, the present results suggest that the high rates of SAD among PD patients reported in the literature are due to a fear to be judged in a negative manner in public due to their tremors and other aspects of PD, rather than being related to a specific neurobiological process occurring in this movement disorder.

P0004

Evaluation of apathy using reaction time task in neurodegenerative diseases

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Background: Apathy, defined as a lack of motivation, is common in neurodegenerative diseases. Specific scales are available for the evaluation of apathy but it lacks objective evaluation methods.

Aim: To evaluate the changes in reaction time task according to the presence or absence of reward stimulation and to assess the relation between these performances and apathy scales.

Methods: 13 patients with Mild Cognitive Impairment, 15 patients with Alzheimer's disease and 91 elderly healthy subjects were enrolled. A computerized test using the experiment software E-prime[®] was designed to assess reaction times in different experimental conditions after a training trial (neutral, stimulation, stress, stimulation after stress, extinction) and relation between the performances to the test and the Apathy Inventory (AI) scores were observed.

Results: Patients reaction times were significantly higher than control. Reaction times were lower in stimulation conditions and maximum during the stress condition. In the patients population, apathetic subjects (AI total score >2) had significantly higher reaction times than non apathetic subjects ($p < 0.05$). We found significant positive correlation between AI dimensions lack of initiative and lack of interest, and reaction times in the following conditions: lack of interest and neutral condition ($p < 0.01$), stimulation condition ($p < 0.05$), lack of initiative and stress condition ($p < 0.05$). Furthermore, AI total score was correlated with both stimulation and extinction conditions ($p < 0.05$). There was no significant correlation with the emotional blunting.

Conclusion: the reaction time task may be a promising tool for an objective evaluation of the initiative and interest dimensions of apathy in neurodegenerative diseases.

P0005

Study of the prevalence of depression among patients with Parkinson

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Background and Aims: Depression is the psychiatric co-morbidity most commonly associated with Parkinson's disease (PD). However, depression is often under-diagnosed and under-recognized and the affected patients seldom receive treatment for this psychiatric disorder. The objective of the present study was to determine the prevalence of major depression among Brazilian patients with a diagnosis of PD.

Methods: The study was conducted at the movement disorders outpatient clinic of the University Hospital, Faculty of Medicine of Ribeirão Preto. A total of 111 consecutive patients with a diagnosis of PD were selected and independently interviewed using the SCID-IV-CV (DSM-IV). Patients with dementia associated with PD were excluded.

Results: Patient age ranged from 24 to 85 years (mean: 61.2 + 12.7 years). Fifty-eight of the 102 patients (52.3%) were females and 53 (47.7%) were males. The current prevalence of depression was 26.1% (29) and the lifetime was 57.7% (64). Regarding gender, the current prevalence of depression was 15.1% (9) for males and 36.2% (21) for females, with the difference being statistically significant ($p < 0.01$). The lifetime prevalence of depression was 33.4% (23) for males and 70.7% (41) for females ($p < 0.01$).

Conclusions: The high prevalence of major depression among patients with PD and the predominance of women detected in this study are comparable to the rates observed in studies conducted in other countries. Strategies for an early diagnosis and adequate treatment appear to be necessary and opportune in order to improve the quality of life of the patients and to prevent possible complications such as suicide.

P0006

Sexual behaviour and psychiatric disorders - A clinical case

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Objectives: The authors have as a goal to conduct a reflection about an important public health problem that is the influence of neuro-psychiatric disease in a patient sexual behaviour. Thus, a case study is described of a patient, of 49 years old, hospitalized with bipolar affective disorder diagnosis – depressive phase, in which unprotected sexual intercourse was predominant with several partners.

Methods: Clinical observation, conducted during three months of hospitalization, showed a sexual behavioural inadequacy, which was not justified by decompensation of the psychiatric feature previously referred. We also verified a cognitive dysfunction.

Results: The results of this clinical evaluation, including neuropsychological evaluation and organic complementary study (ACT-CE and SPECT), suggest the diagnosis of front-temporal dementia.

Conclusion: The authors finish emphasising the existence of psychiatric disorders, functional and organic, with sexual risk