

Poster Session II

7 April 2008

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

A.G. Alias. *Biochemistry Department, Amrita Institute of Medical Sciences, Kochi, India*

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

D. Marcoci¹, M. Radu², A. Chirita¹, S. Radulescu¹. ¹ *University Clinic of Psychiatry, Craiova, Romania* ² *Dolj County Office for Pensions, Craiova, Romania*

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

J.A. Crippa, A.C. Lemos-Corrêa, M.H.N. Chagas, A. Santos-Filho, C. Garcia-Leal, S.R. Loureiro, G.G.R. Rodrigues, V. Tumas. *Departamento de Neurologia, Psiquiatria E Psicologia Médica, Faculdade de Medicina de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto, Brazil*

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