

**Conclusions:** There is certainly interplay of organic and non-organic factors in the genesis of non-psychotic disturbances after brain damage. The hereditary, constitutional and psychogenic factors are of great importance in the typological formation of the neurotic syndromes after brain damage.

## P290

Dopamine agonists and pathological gambling in parkinson disease

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**Background and aims:** There is an increasing awareness that pathological gambling can occur as an adverse effect of some dopamine agonist, specially pramipexole, used in the treatment of Parkinson disease. The aim of this study is: 1) to make a review of the literature concerning to this issue; 2) to describe a case that developed pathological gambling after increasing dopamine agonist dose in clinical practice.

**Methods:** We systematically searched PubMed database using the following combinations of variables: “compulsive gambling”, “Parkinson disease”, “dopamine agonist” and “gambling”. We also review the clinical record of the patient we identified.

**Results:** We found 36 articles. 4 of them were excluded because they were not strictly about pathological gambling. They describe an association between treatment with dopamine agonists and reversible impulse control disorders (ICD) such as hypersexuality, addictions, compulsive eating and pathological gambling. Daily doses of dopamine agonists were significantly higher in patients who developed an ICD. Pramipexol was the predominantly reported medication. Our case is about a 46 year old married man with Parkinson disease. After increasing the dose of pramipexole in order to achieve a greater efficacy he gradually developed ICD, pathological gambling type. This led to a change in his antiparkinsonian medication.

**Conclusions:** As many cases of ICD after using dopamine agonists are being reported in the literature, doctors should aware patients about this potential adverse effect.

## P291

Asian cultural influences on dementia in a developed country: a Singapore perspective

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**Background and aims:** One of the major challenges in Asia is the impact of diseases in the aging population. Dementia is a common and disabling disorder in the elderly which has gained growing public health relevance. The Asian populations in developing countries have been known to report a lower prevalence of dementia, partially influenced by their cultural background and traditional societal roles for the elderly. We aim to investigate how living in a developed country with a strong Asian cultural background, influence perceptions on dementia.

**Methods:** We invited in-patients of a tertiary hospital, with no previously diagnosed cognitive impairment, to complete an anonymous, self-filled questionnaire about their perceptions of dementia, societal trends and the current role of elderly in Singapore.

**Results:** Majority of respondents had strong traditional values and felt a duty of care for elderly within their family. Societal norms still suggests that our elderly would more likely give up position of

authority and property for younger members of the family. Our elderly also became significantly less active in society after retirement.

**Conclusion:** With the rapid development of our society and trend towards nuclear families, the resultant possibility of higher carer stress and pressure for residential placement facilities are likely to grow.

## P292

peg-interferon alpha and ribavirin (peg-IFNalpha/RBV) therapy may induce working memory disturbances in chronic hepatitis c (CHC) patients

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There was a great improvement in CHC prognosis after the introduction of combination therapy with peg-IFNalpha/RBV. The highest treatment drop-out rate is related to interferon-induced mental health problems including confusional states, depressive episodes and manic conditions. The literature concerning working memory abnormalities observed during peg-IFNalpha/RBV therapy of CHC patients was scarce.

The aim of the study was to describe the probable connection between peg-IFNalpha/RBV treatment and the development of cognitive functions' disturbances in CHC patients.

Forty-seven CHC patients were consecutively enrolled in the study. They were arbitrarily divided into two groups: experimental and control consisting of 26 and 21 participants, respectively. Experimental group patients were given peg-IFNalpha/RBV treatment for 48 weeks in standard doses recommended by manufacturers. Control group patients did not receive the above treatment. Both groups underwent neuropsychological examination at the beginning and after 12 weeks of treatment or observation. Neuropsychological evaluation consisted of Stroop Color Word Test (SCWT) and Trail Marking Test (TMT) - instruments used for the assessment of the higher cognitive functions like working memory.

Cognitive performance measured by means of SCWT and TMT decreased significantly in the experimental group after 12 weeks of combination therapy. No significant deterioration was seen in the control group over the period of observation.

The findings suggest that peg-IFNalpha/RBV therapy of CHC patients is connected with the deterioration in cognitive functioning including working memory. The above changes may be the effect of interferon alpha-induced neurotransmission abnormalities in the limbic system, dorso-lateral prefrontal cortex and anterior cingulate cortex.

## P293

Attention abnormalities in chronic hepatitis c (CHC) patients during peg-interferon alpha and ribavirin (peg-IFNalpha/RBV) therapy may persist after treatment discontinuation

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Persistence of various cognitive abnormalities was observed after peg-IFNalpha/RBV therapy discontinuation. The literature concerning CHC patients was scarce and inconclusive.

The aim of the study was to answer the question whether peg-IFNalpha/RBV-induced cognitive functions' disturbances resolve eight weeks after treatment discontinuation.

26 CHC patients were consecutively enrolled in the study. They were given peg-IFNalpha/RBV treatment for 48 weeks in the standard doses recommended by manufacturers. Patients underwent neuropsychological examination consisting of Stroop Color Word Test (SCWT), Trail Marking Test (TMT), Auditory Verbal Learning Test (AVLT), Attention d2 Test (d2) and Hooper Visual Organization Test (HVOT) three times: before the beginning (t=0), after 12 weeks of medication (t=1) and 8 weeks after treatment discontinuation (t=2).

Cognitive performance measured by means of all mentioned tests decreased significantly after 12 weeks of combination therapy. However, no significant differences in the results of TMT, AVLT, HVOT and SCWT color words subtest between t=0 and t=2 were seen, significance between these two time points in d2 and SCWT colors and words subtests performance was observed. SCWT subtests results revealed a trend towards normalization but d2 performance in t=2 was ever poorer comparing with t=1.

The findings suggest that most cognitive disturbances observed during peg-IFNalpha/RBV therapy in CHC patients resolve eight weeks after treatment discontinuation, but attention abnormalities may persist up to 8 weeks after treatment of discontinuation. The complete resolution of attention abnormalities observed during peg-IFNalpha/RBV therapy may require longer period or may be the effect of the permanent anterior cingulate cortex damage.

## P294

Normal and pathological aging of attention in huntington's disease and normal elderly subjects

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**Background and aims:** Recent attention models view exogenous and endogenous attention as separate components of attention. Exogenous attention is defined as automatic, involuntary, directed by external stimulation and unaffected by memory load, while endogenous attention is defined as executive, voluntary, directed by voluntary acts and affected by memory load. Methods. Two studies were designed to examine if decline in these two components of attention is similar in normal aging and Huntington's disease (HD). Standardized tests derived from Posner's model of visuospatial attention were administered to normal elderly subjects (n=13), patients with HD (n = 17) and matched control subjects (n = 42).

**Results:** In healthy elderly subjects, both exogenous and endogenous attention were found to decline within normal limits, and the decrease was greater for endogenous attention, particularly in situations of perceptual conflict. Patients with HD showed marked impairment of endogenous or voluntary attention components, while exogenous or automatic components were preserved.

**Conclusions:** Our results suggest that anterior executive and posterior automatic neuronal networks for attention are differentially vulnerable to the effects of normal aging and neurodegenerative diseases, despite the fact that both normal aging and HD are characterized by decreased endogenous attention in situations of perceptual conflict.

## P295

Carotid doppler ultrasound modifications in alzheimer disease

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**Objective:** Triplex ultrasound evaluation of CCA in Alzheimer.

**Methods and results:** Our study group, consisted of 52 patients (32 male, mean age 68.2+/-2.2 yr), confirmed with Alzheimer dementia (AD) according to DSM IV-R criteria, was evaluated by triplex ultrasonography at the common carotid arteries (CCA) level and, also, by a cerebral CT-scann. The results were compared with a controlled matched group of similar age. In the AD group, 62.2% of patients presented ultrasonographic modifications: a larger CCA diameter (8.2+/-0.6 mm) and an increased arterial impedance (RI 0.82+/-0.05), significantly higher (p<0.001) compared with the values obtained from the controlled group (D 7.2+/-0.5 mm; RI 0.76+/-0.02). Also, IMTh was more echogenous, diffuse or patchy thickened, with a mean maxIMTh 1.6 +/-0.02 mm in AD group, compared with 0.8+/-0.02 mm in the controlled group. We underline the absence of arterial atherosclerotic plaques in the all length of CCAs in AD group. The augmentation of arterial impedance correlated with the presence of cortical atrophy revealed by cerebral CT-scann. In the AD group with these ultrasonographic aspects, we recommended vasodilator drugs in association with cholinomimetics.

**Conclusion:** The vascular modifications (increased resistivity and decreased regional cerebral blood flow) in AD, draw attention on the early Doppler evaluation of these category of patients. The ultrasonographic CCAs modifications, even in the stage of minimal cognitive deficit (when the criteria for establishing the diagnosis of dementia are not fulfilled), represent a factor of therapeutic indication for cholinomimetics, with a possible influence in the clinical and mental disease prognosis.

## P296

Spanish validation of the adult ADHD self-report scale-version 1.1

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Adult attention deficit hyperactivity disorder (ADHD) has a prevalence up to 4% of the general adult population, however in Spain adult ADHD is underdiagnosed. Screening instruments can help clinicians to detect adult ADHD. The World Health Organization Adult ADHD Self-Report Scale-Version 1.1 (ASRS v1.1) is a 6-question scale designed to screen for adult ADHD.

A validation of Spanish version of the ASRS v1.1 was performed.

A case control study was carry out (adult ADHD vs non ADHD) in the Adult ADHD Program of the Hospital Universitari Vall d'Hebron (Barcelona). ADHD evaluation was performed using Conners Adult ADHD Diagnostic Interview for DSM-IV (CAADID-Part II) and the diagnosis was compared with the ASRS v1.1 responses. Logistic regression study was made to evaluate the sensitivity,