Material and methods: Twenty five AD patients, with anxiety and chronic musculoskeletal pain (experimental group) and thirty one age-matched patients with Alzheimer’s disease and chronic musculoskeletal pain without comorbid mood disorders (control group) were examined. All participants were diagnosed with chronic musculoskeletal pain, according to their medical history and their medications (all of them took non-steroid anti-inflammatory drugs). The neuropsychometric evaluations were performed with the following tools: Geriatric Pain Measure, Patient Health Questionnaire, Pain Assessment in Advanced Dementia, Mini Mental State Examination and Pain Anxiety Symptom Scale.

Results: AD patients with comorbid anxiety disorders tend to report increased pain intensity more frequently compared to controls. Scores in fearful thinking and physiological responses scales of PASS were higher in female than male ($p = .014$), whereas scores in the cognitive anxiety scale of PASS have shown a highly significant positive correlation with the years of education ($p < .001$).

Discussion: According to the results of the present study, anxiety is a significant component and an important part of pain experience among patients with AD, even if they are not able to verbalize it; thus needs to be taken into consideration by the health professionals for the patient’s management.


Abstract — WCN 2013
No: 2390
Topic: 5 — Dementia
Catechin suppressed LPS-induced neuroinflammation in BV-2, C6 and NG108-15 cells by modulating CCL21 through PI3K-Akt
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Background and objectives: Excessive microglial and astroglial activation that leads to chronic neuroinflammation plays a vital role in the progression of Alzheimer’s, Parkinson’s and Huntington’s diseases. Catechin or flavan-3-ol is mainly found in tea is reported to be neuroprotective. We investigated the regulation of neuroinflammation of LPS-induced neuroinflammation in BV-2, C6 and SHSY-5Y cells.

Material and methods: The expression of NO, ROS, PGE₂, TNF-α, IL-1β, IL-2, IL-6, IFN-γ, iNOS, COX-2, CCL21 and the molecular pathways involved were determined by Flow cytometry chip beads array (CBA), Western blot and ICC. The protective effects of catechin on BV-2, C6 and SHSY-5Y co-cultured model induced with LPS were further evaluated.

Results: Catechin downregulated iNOS expression leading to concomitant decreased of NO and ROS released. This was followed by reduction of PGE₂ production leading to downregulation of TNF-α, IL-1β, IL-2, IL-6, IFN-γ and COX-2 expression. Catechin downregulated CCL21 and prevented NF-κB translocation in BV-2 and SH-SYSY cells. Withal, Catechin upregulated PI3K-Akt expression, suggesting activation of pAkt might be responsible in mitigation of neuroinflammation.

Conclusion: Suppression of CCL21 in BV-2 and C6 activation through PI3K-Akt by catechin conferred protection on SH-SYSY cells against LPS-induced neuroinflammation. This finding further heightens the specific therapeutic potential of catechin for the treatment of neurodegenerative diseases.

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Abstract — WCN 2013
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Topic: 5 — Dementia
The impact of neurological condition on driver distraction in a driving simulator experiment: Preliminary findings
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Background: Age-related neurological disorders may affect driver distraction, and medication may also impair driving. In the early stages, neurological disorders have little impact on daily life yet may significantly impact one’s driving ability. Mild cognitive impairment (MCI), the predementia stage of various dementing disorders, is associated with impaired driving to a small extent (Frittelli et al., 2009) and self-reported road accident involvement is correlated with future diagnosis of dementia (Lafont et al., 2008). It is unknown whether distraction affects the driving ability of neurology patients to the same extent as healthy persons. Because of the ageing population, the need to investigate this question becomes critical.

Objective: To present preliminary findings from a recently funded research programme, National Strategic Reference Framework (NSRF 2007-13, O.P. Thales), on the causes and impact of driver distraction in a driving simulator experiment.

Patients and methods: At least 90 patients with neurological disorders (MCI, mild Alzheimer’s disease, Parkinson’s disease) will be recruited, and will be compared with at least 60 middle aged and older participants. A neuropsychological battery that measures attention, memory, visual and executive functions, a neurological exam, and a detailed history of medication and sleep difficulties are included.

Results: Preliminary findings are presented on the impact of presence/severity of neurological disorder, use of medications, and sleep disorders on driving performance with and without distraction, under different driving conditions.

Conclusion: The neurological parameters that predict driving performance under different conditions are summarized and discussed. Preliminary recommendations are presented on criteria for safe driving.

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Abstract — WCN 2013
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Topic: 5 — Dementia
Potential effect of amyloid imaging on diagnosis and intended management of patients with cognitive decline: Impact of appropriate use criterion
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Background: Published appropriate use criteria (AUC) by Johnson et al. (2013), provide guidelines for selecting patients for whom amyloid PET could be useful.

Objectives: To evaluate the impact of amyloid PET on diagnosis and intended management in a set of patients likely to meet AUC.