Methods: We examined 229 cases from a completed study of Florbetapir amyloid PET in patients undergoing or having recently completed an evaluation for cognitive decline in which AD was suspected. All cases had a provisional diagnosis, and an intended treatment/management plan prior to PET scan, and a final diagnosis and management plan post PET scan. Based on the retrospective review of prescan diagnosis and demographics, cases were classified as likely meeting AUC (AUC-like) or not.

Results: 140/229 (61%) subjects were AUC-like. The nonAUC cases included typical AD, MCI due to AD and cognitive decline without objective evidence of impairment (CD), 67/140 (48%) AUC-like cases were amyloid positive (Aβ+). Within the nonAUC group, the proportion Aβ+ ranged from 6/22 (27%) in CD patients, to 23/34 (68%) in typical AD. Diagnosis changed after PET scan for 62% of AUC cases vs 43% of nonAUC cases. The proportion of patients with change in management plan was high (>85%) regardless of AUC category or diagnosis.

Conclusions: The AUC criteria exclude patients with a relatively high (typical AD) or low (CD) probability of an Aβ+ scan. PET amyloid imaging altered diagnosis and management in patients selected according to AUC.


Abstract — WCN 2013
No: 2364
Topic: 5 — Dementia
α-Lipoic acid protects against LPS-induced BV-2 activation and MPTP-induced toxicity in SH-SY5Y neuronal cells
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Background and objectives: α-Lipoic acid (LA), a natural dithiol compound is a powerful antioxidant that has been used to treat various neurological diseases. Microglial activation has been implicated in chronic neuroinflammation leading to neurodegenerative diseases such as Alzheimer’s and Parkinson’s diseases. For the first time, the anti-inflammatory effects of LA and its possible mechanisms in LPS-stimulated inflammation in microglial BV2 cells and MPTP-induced toxicity in SH-SY5Y were investigated.

Material and methods: Cell viability was measured by using MTT assay. Flow cytometry chip beads assay (CBA), Western blot and ICC were used to analyse NO, ROS, PGE2, TNF-α, IL-1β, IL-6, IFN-γ, iNOS, COX-2, CCL21 expression and the involvement of signalling pathways such as MAPK cascades, pMTOR-P3K-Akt and NF-κB. The protective effects of LA on BV-2 and SH-SY5Y co-cultured model induced with LPS and MPTP were further evaluated.

Results: LA significantly attenuated LPS-induced iNOS, NO, ROS, PGE2, TNF-α, IL-1β, IL-6, IFN-γ and COX-2 expression as shown in CBA and Western blot. LA also suppressed the expression of CCL21, a pro-inflammatory chemokine in both LPS-treated BV-2 and MPTP-treated SH-SY5Y. Moreover, LA inhibited IκBα degradation and thus, prevented p65 NF-κB translocation in BV-2 and SH-SY5Y cells. LA increased cell viability and rescued co-cultured SH-SY5Y cells from MPTP-induced toxicity and apoptosis.

Conclusion: The anti-inflammatory properties of LA prevented excessive microglia (BV-2) activation and thus, protected SH-SY5Y cells from LPS and MPTP induced toxicity by downregulating pro-inflammatory proteins through P3K-Akt pathway. This suggests a therapeutic potential of LA for the treatment of neurodegenerative diseases.


Abstract — WCN 2013
No: 1156
Topic: 5 — Dementia
Patient and caregiver adherence and persistence to the rivastigmine patch in a non-interventional clinical study
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Background: Rivastigmine transdermal patch provides smooth drug delivery and therefore increased tolerance at similar efficacy compared to the oral formulation. An earlier registration study for the patch (IDEAL) with 1059 caregivers demonstrated that more than 70% caregivers prefer rivastigmine transdermal patch to capsules.1

Objective: To identify patient and caregiver-related factors associated with adherence, persistence and caregiver satisfaction with rivastigmine patch.

Methods: In this non-interventional trial, adherence and persistence were assessed after three and six months of patch treatment. Relevant factors from literature for persistence and adherence to medication were validated prior to study enrolment.

Results: 127 caregivers answered the questionnaires, 3 months (visit 1) and 110 caregivers after 6 months (visit 2) after first prescription of rivastigmine patch. Mean MMSE score of the patients was 20.8 after 3 months of treatment. Physician ratings for CGI-I scores for efficacy suggested patients as ‘improved’ (66.2%). Caregivers were adherent to patch use at both visit 1 and visit 2 respectively, (‘never’ omitted 74.8%; 78.2% or ‘never’ paused for a while, 73.2%; 74.5%) and agreed with ease of its application. Efficacy was rated from caregivers for visit 1 and visit 2 respectively, as ‘satisfied’ for memory (62.2%; 56.4%), activities (69.3%; 66.4%) and behavior and emotions (65.4%; 64.5%). Valuations of tolerability were deemed as ‘good’ (90.5% and 90%) at visit 1 and visit 2 respectively.

Conclusion: Caregivers achieved reasonably high adherence rates to rivastigmine patch. This may be linked to its good efficacy outcomes and favourable tolerability profile.

Reference


Abstract — WCN 2013
No: 1169
Topic: 5 — Dementia
Ease of use of rivastigmine patch can help manage medication for caregivers and patients with Alzheimer’s disease
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Background: Rivastigmine transdermal patch provides smooth drug delivery and better satisfaction to caregivers and patients compared to oral formulation. An earlier study demonstrated that more than 70% caregivers prefer the rivastigmine transdermal patch to the capsule.

Objective: To identify patient and caregiver-related factors associated with adherence, persistence and caregiver satisfaction to rivastigmine patch.

Methods: In this non-interventional, clinical and psychosocial study, caregiver or patient-related factors impacting on rivastigmine patch