P01-498

SMELL IDENTIFICATION TEST AS A PROGRESSION MARKER IN ALZHEIMER'S DISEASE

L. Velayudhan[1,2], M. Pritchard[2], S. Lovestone[2]
[1]Department of Health Sciences, University of Leicester, Leicester, [2]Department of Old Age Psychiatry, Institue of Psychiatry, London, UK

Introduction: Factors influencing or predicting progression in Alzheimer's disease (AD) is not well understood. Olfactory dysfunction, impaired smell identification in particular, is known to occur in AD. Mesial temporal lobe, important for memory function is also critical for the processing of olfactory information. In view of the common anatomical substrate, we hypothesized that olfaction dysfunction worsens faster in people with AD with rapid cognitive decline compared to those with slower cognitive decline.

Aims: To test whether smell identification test can be used as a predictor for illness progression in AD patients.

Methods: Forty one participants with late onset mild to moderate AD were recruited from mental health services for older adults. Subjects were classified as 'Rapid Progressors' defined on 'a-priori' with a loss of 2 or more points in Mini-Mental State Examination (MMSE) within six months. Assessments included MMSE, Neuropsychiatric Inventory, Bristol Activities of Daily Living, and the University of Pennsylvania Smell Identification Test (UPSIT), at baseline and after 3 months.

Results: Twenty subjects were 'Rapid Progressors', and had lower UPSIT scores compared to 'Non-Rapid Progressors' both at the baseline ($p=0.02$) and at follow up after 3 months ($p=0.05$). Baseline UPSIT correlated with follow up UPSIT ($r = 0.5$, $p < 0.01$) and MMSE ($r=0.4$, $p = 0.04$). Also it was the baseline UPSIT score that best predicted ($p < 0.05$) the follow up smell and cognitive function on linear regression analysis.

Conclusions: Smell identification function could be useful as a clinical measure to assess and predict progression in AD.

https://doi.org/10.1016/S0924-9338(11)72209-X Published online by Cambridge University Press