

DOES A COMBINATION OF THE MINI-MENTAL STATE EXAMINATION AND CLOCK DRAWING TEST (MINI-CLOCK) IMPROVE DETECTION OF MILD ALZHEIMER'S DISEASE?

J. Benito¹, J. Cacho², R. Garcia², J.L. Vicente², B. Fernnandez-Calvo³, A. Michel⁴

*Neurology, Madrid, Spain*¹;

*Neurology & Statistic Departments, Clinico Universitario, Salamanca, Spain*²;

*Psychology, Paraiba, Brasil*³ & *Psychiatry, Leicester, UK*⁴

jbenitol@meditex.es

The increasing prevalence and incidence of Alzheimer's disease (AD) and development of new disease-modifying treatments has fueled the research into development of accurate and easily administered screening instruments for AD. However, there is currently a need to develop tools to identify patients with mild AD. We determined the validity and reliability of a brief easily administered cognitive screening battery consisting of fusion of two well-known brief tests (Mini-Mental status examination [MMSE] and Clock Drawing Test [CDT]) (Mini-clock) to differentiate between patients with probable mild AD and healthy control subjects. 66 consecutive patients with probable mild AD and 66 matched healthy controls seen in a memory clinic setting were compared. Receiver operating characteristic (ROC) curve analysis was used to calculate the cut-off value permitting discrimination between probable early AD and healthy control subjects. Interrater and test-retest reliability (correlation coefficients) were also assessed. Mean cognitive scores for patients with AD and control subjects on all 2 individual tests were significantly different (for each, $P < 0.001$). The mean area under the ROC curve for Mini-clock was higher than that obtained with MMSE or CDT (0.973 vs. 0.952 and 0.881, respectively). Test-retest reliability for the Mini-clock was 0.99, meanwhile interrater reliability was 0.87. The mean time to complete the test for all subjects was 8 minutes and 50 seconds. The Mini-clock is highly sensitive and specific to mild AD. It has a high interrater and test-retest reliability, can be quickly administered, and does not require major training.