VALIDATION STUDY OF THE MONTREAL COGNITIVE ASSESSMENT (MOCA) FOR ALZHEIMER’S DISEASE AND MILD COGNITIVE IMPAIRMENT PATIENTS

S. Freitas¹, M.R. Simões¹, L. Alves¹, I. Santana²

¹Faculty of Psychology and Educational Sciences, University of Coimbra, ²Department of Neurology, Coimbra University Hospital, Coimbra, Portugal

Introduction: Montreal Cognitive Assessment (MoCA) is a brief cognitive screening instrument developed for overcoming limitations of the Mini-Mental State Examination (MMSE) in the detection of Mild Cognitive Impairment (MCI).

Aims: The aim of this study is to validate the MoCA for the detection of cognitive impairment in MCI and AD Portuguese patients. We evaluated the psychometric properties, convergent validity (with MMSE), and discriminant validity of the MoCA to detect MCI and AD, and established the respective cut-off points.

Methods: A clinical group of MCI (N=90) and AD (N=90) were recruited at the Dementia Clinic, Neurology Department of Coimbra University Hospital. The diagnosis was previously established based on international criteria (MCI: Petersen et al. 1999; probable AD: APA, 2000). The two control groups (C_MCI: N=90; C_AD: N=90) are comparable regarding gender, age and education. All patients were assessed with MoCA and MMSE.

Results: MoCA show a good internal consistency (Cronbach alpha=.90), interrater reliability (r=.98), and correlation with MMSE (r=.85, p< .0001). According the results of the ROC curve analysis, with a cut-off point of 21 the MoCA shows a very good sensitivity (81%) and specificity (77%) to MCI [MMSE (MCI cut-off point=28): sensitivity=66.7%, specificity=72%]. With a cut-off point of 16 the MoCA has an excellent sensitivity (88%) and specificity (98%) to AD [MMSE (AD cut-off point=25): sensitivity=85%, specificity =93%].

Conclusions: MoCA shows higher sensitivity and specificity than the commonly used MMSE in detecting MCI and AD.