NEUROPSYCHOLOGICAL MARKERS AND CIRCADIAN SALIVARY CORTISOL IN COGNITIVELY NORMAL ELDERLY AND TWO MCI SUBPROFILES: NON-AMNESTIC AND MULTIDOMAIN. A LONGITUDINAL STUDY IN MADRID

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Introduction: Early detection of MCI and its subtypes is essential, as is seeking biomarkers that allow the prediction of its evolution, because MCI is a possible precursor of dementia. Moreover, stressful situations throughout one’s lifetime, and the resulting exposure to high levels of cortisol, increase the magnitude of cognitive deterioration in old people and even accelerate its onset.

Aims: To identify people with possible MCI and to conduct a three-year follow-up. To classify subjects in four groups: healthy subjects, amnestic MCIs (aMCI), non-amnestic MCIs (naMCI), and multidomain MCIs (mMCI). To study the relation between their cognitive status and their circadian pattern of salivary cortisol secretion.

Methods: Of the 144 subjects assessed -65 to 89 years-, 99 were selected (60 controls and 39 MCIs), who remained stable over three years. They were assessed with neuropsychological tests, and saliva samples were collected at three moments of the day: morning, 8 hours later, and evening.

Results: The percentage of stable subjects over three years was: 50% healthy, 33.67% naMCI, and 16.33% mMCI. The naMCIs displayed higher morning and evening levels of cortisol than the healthy subjects.

Conclusions: The mMCI levels of cortisol were similar to those of the healthy subjects.

There was a relation between morning cortisol levels and verbal, fonetic and semantic, fluency independently of cognitive status.