

FRONTAL-TYPE COGNITIVE IMPAIRMENT IN ADVANCED CHRONIC RENAL FAILURE (CRF): WIDE NEUROPSYCHOLOGICAL ASSESSMENT AND RELATIONSHIPS WITH QUANTITATIVE ELECTROENCEPHALOGRAPHY (QEEG)

J.A. Barios¹, V. Fernández-Armayor², B. Benbunan², J.L. Teruel³, M. Fernández³, A. Pedrera⁴, C. González⁵, J.M. Gaztelu¹

¹*Neurología Experimental, Hospital Universitario Ramón y Cajal (HURC), IRYCIS, Madrid*

²*Unidad de Ciencias Neurológicas, Madrid*

³*Nefrología, HURC, IRYCIS.*

⁴*Neurofisiología Clínica, HURC, IRYCIS*

⁵*Deimos Space, Madrid*

bettina_benbunan@hotmail.com

Objectives; Cognitive disorders in CRF patients can reduce their quality of life, increase needed sanitary resources and interfere with treatment fulfillment. Its quantification by neuropsychological tests and qEEG may help in their clinical management.

Material and Method: A group of non-demented patients (n=17) with severe CRF, the majority treated with hemodialysis, was assessed. A clinical study, blood test, a wide assessment in cognitive areas (attention, memory, language, executive functions, praxis and gnosis) and emotional aspects (anxiety and depression) as well as a qEEG recorded during basal conditions (spectral analysis, mean-dominant frequency and sample- and Shannon entropies) were performed.

Results: The most significant finding was that all patients showed a cognitive disorder in, at least, one of the assessed areas, associated to frontal lobes malfunction (attention, executive functions, memory encoding and retrieval) and minimal disturbance in linguistic, praxic and gnostic abilities. While visual analysis of EEG showed scarce alterations, relevant correlations between qEEG with cognitive impairment, time of evolution and severity of the CRF were found.

Conclusions: Neuropsychological tests and qEEG in advanced CRF patients provide relevant information and should be taken into account in their diagnosis and management.