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Serum levels of natural ocurring IgG against neuronal antigens, Amyloid β peptide and Aldolase in Cubans over 60 years old

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Alzheimer's disease (AD) is the most prevalent form of dementia among the aging population in Cuba and the World . Its long preclinical phase and the lack of biomarkers that would allow an early diagnosis pose great challenges for the development of effective therapeutic approaches. At the earliest clinical stages of Alzheimer's disease, when first symptoms are mild, making a reliable and accurate diagnosis is difficult. In recent years, the potential use of natural ocurring auto-antibodies against neuronal antigens has been investigated. Though in some cases the results were promising, the controversial evidence is still not enough to support their worldwide use as biomarkers in AD dignosis. However, the enormous evidency that links this auto-antibodies with the patogénesis and develop of the desease. The moust described of all thems are the auto-antibodies against Amyloid Beta peptide (Aβ). The objective of this study was to describe the serum levels of natural ocurring IgG against Neuronal antigens, against Aβ and against Aldolase in probable AD, mild cognitive impairment (MCI), and cognitively normal (NC) Cubans over 60 years. We conducted a cross-sectional study targeting the Cuban population over 60 years living in Havana. Natural ocurring IgG against Neuronal, against Aβ and against Aldolase were measured by different ELISA designs. Differences in mean antibody levels were assessed for significance with repeated measures ANOVA with a significance level of 0.05. Only the serum levels of natural ocurring IgG against Aβ were statistically higher in the probable AD patients than in the MCI and CN individuals. Additionally, in patients with probable AD, higher serum levels of natural ocurring IgG anti-Aldolase correlates with higher serum levels of natural ocurring IgG anti-Aβ. Although more research is needed, the results suggest that natural ocurring IgG against Aβ could be use a potential biomarker in AD diagnosis. Also, indicates the existence of a possible association between natural ocurring IgG against Aβ and natural ocurring IgG against Aldolase serum levels in AD patients.

Biography

Leonardo Cristiá Lara has completed his Bachelor in Biochemistry and Molecular Biology at the University of Havana. By the end of his Bachelor`s studies he was awarded for his aotstanding scientific labor as student. Also he has passed with honors several post-graduated course at the University of Havana and has been part of its Young Teachers Training Program. Currently he is studying a Master in Sciences at the University of Zürich. He has work in the Neurosciences Center of Cuba during the last 3 years as Junior Researcher. He has recieved several awards in scientific events inside Cuba and published 2 papers in reputed journals.

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