P-165 - REFERENCE INTERVALS OF THE SERUM AMINO ACID PROFILE IN CUBAN CHILDREN.

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**INTRODUCTION:** Amino acids are organic compounds and biomarkers of error innate of metabolism and nutritional state. Reference values (RI) are an interval specified in the distribution of values obtained from healthy individuals of population. The establishment of RI is essential for clinical laboratory test interpretation. We validated an HPLC method for quantification of fourteen amino acids in serum in National Center of Medical Genetics. The amino acid values vary according to age, nutritional status and dietary habits in population. In Cuba, the RI of amino acids are unknow in children. **OBJECTIVE:** The aim of this work is to estimate the reference values of serum amino acids profile in Cuban children by HPLC. **MATERIALS AND METHODS:** Serum samples from healthy children were analyzed (n = 154); two groups were distributed: Group 1: 1 day-4 months (n = 73) and Group 2: 2-7 years (n = 81). We analyzed the follow amino acid: Ser, Gly, His, Thr, Ala, Pro, Arg, Tyr, Val, Met, Ile, Leu, Phe and Lys. There were performed by a validated HPLC method, with pre-column derivatization, in reverse phase and detection at 254 nm. The Statistic 7.0 program was used for the statistical analysis. The RI were estimated from the calculation of the 2.5th and 97.5th percentiles. **RESULTS:** We found differences between amino acid levels in both age group. Several factors such as age, diet, protein intake should be associated with these differences. Besides, each amino acid plays biological functions in the different stages of neurodevelopment and growth of the child. **CONCLUSION:** The RI of the serum fourteen amino acids in Cuban children were established by HPLC method. So, we will use these normal values for the diagnosis and biochemical follow up of congenital aminoacidopathies.