

March 12-13, 2018
London, UK

Ilgar Mamedov, Int J Drug Dev & Res 2018, Volume 10

DETERMINATION OF THE REFERENCE INTERVALS OF BIOCHEMICAL MARKERS OF PEROXISOME DISORDERS IN CHILDREN

Ilgar Mamedov

LLC ChromsystemsLab, Russia

Long chain fatty acids as well as the fatty acids with a branched chain, pristanic and phytanic acid, are extremely hydrophobic and practically insoluble in water. Inside the cell, they are in the form of esters of coenzyme A. In patients with abnormal peroxisome function, an increased content long chain fatty acids chain longer than 26 carbon atoms will be observed in the process of diagnosis can also use fatty acid: hexacosanoic acid C26:0, lignoceric acid C24:0, behenic acid C22:0, and their relations. In our work, we used the method of gas chromatography with mass detection (GC-MS) and electron impact ionization (Shimadzu GCMS QP-5050A). The method involves the preliminary derivatization of N-methyl-N-(tert-butyldimethylsilyl)trifluoroacetamide (MTBSTFA). In order to determine the total content long chain fatty acids, pristanic and phytanic acid samples should be subjected to acid and alkaline hydrolysis followed by extraction with hexane. The reference values were defined as confidence interval 2.5-97.5% spread in the control group. Reference values of unbranched fatty acids used in this paper were obtained by analyzing 168 control samples by GC/MS. Long chain fatty acids concentration in control samples

is independent of age. Pathological values may differ for different inherited disorders peroxisomal functions. It is essential to link the cases with the maximum number peroxisome functions. The procedure of the analysis of long chain fatty acids by gas chromatography of the sample preparation step was investigated to obtain a specific result. Presented with reference values basic levels of long chain fatty acids and main biochemical markers in plasma in children and adult.

Biography

Ilgar Mamedov completed his PhD and Postdoctoral studies in Pirogov Russian National Research Medical University (RNRMU). He has worked as Scientific Worker in Science Research and Clinical Institute for Pediatrics (Moscow, Russia). He has published more than 20 papers in reputed journals and has been serving as Director for innovation at LLC ChromsystemsLab in Moscow (Russia).

is_mamedov@mail.ru