THE PLASMA GLUCOSE LEVEL OF NON PREGNANT SUDANESE WOMEN IN RELATION TO PLASMA SATURATED, N-3 AND N-6 FATTY ACIDS LEVELS

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Abstract - Essential fatty acids are polyunsaturated fatty acids (PUFA) which contain more than one double bond. The purpose of this study was to investigate the correlation between saturated fatty acids ,omega -3 and omega-6 fatty acids with blood glucose levels of non pregnant Sudanese women . There were no records about the levels of these fatty acids in Sudanese people. Blood samples were obtained from the maternal side of the cord during delivery in Khartoum state hospitals. Full and detailed history and examinations were performed in the study groups. Plasma lipids were extracted by Folch method and separated by Gas Liquid Chromatography (GLC). These results were expressed as mean and standard deviations. The differences in mean were compared by Mann-Whitney U test using SPSS for windows version 15. Blood glucose was measured using electronic glucometer . Our study demonstrated a positive co relation between saturated fatty acids and omega-6 whereas a negative co relation was found between omega-3 fatty acids with glucose level.

Key words - LCPUFA Long Chain Polyunsaturated Acid,Omega-3 fatty acids,Omega-6 fatty acids ,GLC gas liquid chromatography .