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Biography

Ramy M. El-Sherbini, is an Egyptian physician, researcher, and academic specializing in Pediatrics, Neonatology, Pediatric Endocrinology, Diabetes, and Clinical Nutrition. He currently serves as an Associate Professor at the Biological Anthropology Department and Associate Professor of Pediatrics and Neonatology at the Institute of Medical Research and Clinical Studies, National Research Centre (NRC), Egypt. He is also a Consultant in Pediatric Clinical Nutrition and an Associate Alumnus of Harvard Medical School, as well as a member of the Japan Society for the Promotion of Science (JSPS).

IL-6 – 174G/C polymorphism in obese adolescents with nonalcoholic fatty liver disease and its relation to metabolic and biochemical markers

Abstract:

Introduction: It has been suggested that genetic factors also predispose to NAFLD and that these might explain the difference in NAFLD progression between individuals. Polymorphisms of genes involved in inflammation/fibrosis, insulin sensitivity, and lipid metabolism might influence both the mechanism and extent of hepatic steatosis and its progression to NASH and cirrhosis. Several studies found a significant prevalence of IL-6 174C in NASH which likely contributed to the better understanding of the genetic susceptibility to the development of NAFLD and to its progression to NASH. Previous studies have shown the C allele of the IL-6_174G_C promoter polymorphism to be associated with prospective coronary heart disease risk and hypertension.

Aim of the study: 1-Study the prevalence of Genetic polymorphism of IL-6-174G/C in obese adolescents with NAFLD. 2-Investigate genetic polymorphism of IL-6-174G/C association with metabolic and biochemical parameters

Results: The genotype frequencies of GC and CC were significantly more prevalent in NAFLD patients than in controls. In NAFLD, C carriers showed significantly higher values of aspartate aminotransferase, alanine aminotransferase, triglyceride, insulin, and homeostasis model assessment insulin resistance index and lower HDL than did G carriers. Homozygotes showed a higher frequency of metabolic markers. This difference remained unaltered in the allele recessive model.

Conclusion: The present study suggests that the IL-6 – 174G/C polymorphism is associated with the development of NAFLD in obese Egyptian adolescents and is associated with abnormal biochemical and metabolic parameters. These findings could be helpful in identifying individuals at high risk for developing NAFLD among obese adolescents and might help draw specific prevention strategies.