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Study of the role of IL-17F gene polymorphism in the development of immune thrombocytopenia among the Egyptian children

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Background: Interleukin 17F (IL-17F) is a pro-inflammatory cytokine that is recently proved to have a crucial role in the emergence of autoimmune diseases; it induces the expression of various cytokines, chemokines and adhesion molecules. IL-17F polymorphism is subsequently related to enhanced IL-17F expression and activity; which may result in susceptibility to many autoimmune diseases including primary immune thrombocytopenia (PIT).

Aim of the study: This case- control study aimed to investigate the possible association between IL-17F gene single nucleotide polymorphism (SNP) at rs 7488A/G and PIT susceptibility in Egyptian pediatric patients. Subjects and Methods: A total of 50 children with PIT with mean age of 7 years, together with 50 age and sex matched healthy controls were enrolled in the study for evaluation. Polymerase chain reaction- restriction fragment length polymorphism (PCR-RFLP) was used for detection of IL-17F polymorphism at rs7488A/G.

Results: Regarding the genotypes distribution, the frequencies of the AA, AG and GG genotypes were 96, 2, and 2% in PIT patients and 90, 10 and 0% in the control group respectively. The A and G allele frequencies were 97 and 3% in the patients group versus 95 and 5% in the control group. There was no significant difference in either genotypes or allelic distribution between PIT patients and the controls.

Conclusion: our study suggests that IL17F gene polymorphism at rs7488A/G may not contribute to the susceptibility in development of primary immune thrombocytopenia in the Egyptian children.

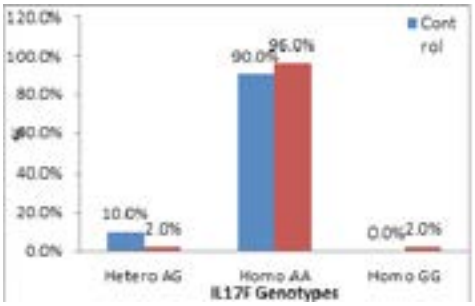

Figure 1: Distribution of IL17F genotype allelic frequencies between the studied groups: (Hetero AG, Homo. AA and Homo GG)

Recent Publications

1. Hamdy M S A D, El-Saadany Z A, Makhlouf M M, Salama A I, Ibrahim N S and Gad A A (2017) TAp73 and ΔNp73 relative expression in Egyptian patients with lymphoid neoplasms. Tumori Journal 103(3):268-271.
2. Khorshied M, Ibrahim O, Gad A and El-Ghamrawy M (2018) The effect of interleukin-1β and interleukin-6 genetic polymorphisms on sickle cell disease course in childhood: an Egyptian study. Archives of Medical Science-Civilization Diseases 3(1):57-63.

3. Abdelsalam L, Elshobaky M A, El-araby R E, Gad A, Khalifa M K, Amer E A, Ismail M M, Mohammed M K E, Farhan M S and Foad H A (2017) Expression of beclin-1 and apoptosis-related genes in childhood acute lymphoblastic leukemia. Archives of Medical Science-Civilization Diseases 2(1):168-173.

Biography

Alaa is a Lecturer and Consultant of Hematopathology, at the faculty of medicine, Cairo University, Egypt. In 2013, she obtained her PhD in Hematology from Cairo University. Moreover, she has earned her postgraduate diploma in biomedical sciences from London Metropolitan University.

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